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* * * * * * * * * * * * * * * STN Columbus
FILE 'HOME' ENTERED AT 17:29:02 ON 22 FEB 2005
=> file caba caplus embase japio lifesci medline scisearch uspatfull
=> e lalvani ajit/au
E1
           146
                   LALVANI A/AU
E2
             1
                   LALVANI A M/AU
            36 --> LALVANI AJIT/AU
E3
                   LALVANI B H/AU
E4
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                   LALVANI D D/AU
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                   LALVANI H/AU
E6
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                   LALVANI K SINGH/AU
                   LALVANI K T/AU
E9
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             3
                   LALVANI KARTAR/AU
E10
             2
                   LALVANI KARTAR SINGH/AU
E11
             1
                   LALVANI KARTAR T/AU
E12
=> s e1-e3 and tuberculosis
           107 ("LALVANI A"/AU OR "LALVANI A M"/AU OR "LALVANI AJIT"/AU) AND
               TUBERCULOSIS
=> dup rem 11
PROCESSING COMPLETED FOR L1
             43 DUP REM L1 (64 DUPLICATES REMOVED)
L2
=> s 12 and cd8?
            13 L2 AND CD8?
=> d 13 bib ab 1-
YOU HAVE REQUESTED DATA FROM 13 ANSWERS - CONTINUE? Y/(N):y
     ANSWER 1 OF 13 CABA COPYRIGHT 2005 CABI on STN
L3
AN
     1999:52147 CABA
DN
     19992002571
                                                   ***tuberculosis***
TI
     Cytotoxic T-lymphocytes against malaria and
     natural immunity to vaccine design
ΑU
       ***Lalvani, A.*** ; Hill, A. V. S.
     Nuffield Department of Clinical Medicine, Institute of Molecular Medicine,
CS
     University of Oxford, John Radcliffe Hospital, Oxford OX3 9DU, UK.
     Clinical Science, (1998) Vol. 95, No. 5, pp. 531-538. 36 ref.
SO
     ISSN: 0143-5221
DT
     Journal
LΑ
     English
ED
     Entered STN: 19990414
     Last Updated on STN: 19990414
     Candidate epitopes from selected antigens of Plasmodium falciparum and
                    ***tuberculosis*** were used to detect peptide-specific
     Mycobacterium
     cytotoxic T-lymphocyte (CTL) responses in individuals exposed to these
     pathogens, using a reverse immunogenetic approach. Detection of CTL
     activity was by 51Cr release cytotoxicity assay and a sensitive ELISPOT
     assay for single-cell interferon-[gamma] release. In the Gambia, 40
     naturally exposed, partially immune Africans living in the village of
     Brefet were studied in 1994 and 8 largely conserved CTL epitopes in P.
     falciparum, restricted by several different HLA class I alleles, were
     identified. In Tanzania 35 residents of Ifakara were studied; several
     conserved CTL epitopes were recognized and CTLs recognized endogenously
     processed antigen. In 2 ***tuberculosis*** patients with HLA-B52
     identified from 39 studied in the UK, a ***CD8*** + CTL epitope was
     identified in ESAT-6, a secreted antigen specific for M.
```

\*\*\*tuberculosis\*\*\* complex but absent in BCG. HLA-B52-restricted peptide-specific interferon-[gamma] release and lytic activity were exhibited by CTLs, which recognized endogenously processed antigen. These results indicate that \*\*\*CD8\*\*\* + CTLs specific for mycobacterial and protozoal antigens are induced during natural infections in humans.

- L3 ANSWER 2 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN
- AN 2004:582045 CAPLUS
- DN 141:258999
- TI Characterization of a Mycobacterium \*\*\*tuberculosis\*\*\* Peptide That Is Recognized by Human CD4+ and \*\*\*CD8\*\*\* + T Cells in the Context of Multiple HLA Alleles
- AU Shams, Homayoun; Klucar, Peter; Weis, Steven E.; \*\*\*Lalvani, Ajit\*\*\*; Moonan, Patrick K.; Safi, Hassan; Wizel, Benjamin; Ewer, Katie; Nepom, Gerald T.; Lewinsohn, David M.; Andersen, Peter; Barnes, Peter F.
- CS Center for Pulmonary and Infectious Disease Control, and Departments of Microbiology, and Immunology, University of Texas Health Center, Tyler, TX, 75708, USA
- SO Journal of Immunology (2004), 173(3), 1966-1977 CODEN: JOIMA3; ISSN: 0022-1767
- PB American Association of Immunologists
- DT Journal
- LA English
- \*\*\*tuberculosis\*\*\* 10-kDa culture filtrate AB The secreted Mycobacterium protein (CFP)10 is a potent T cell Ag that is recognized by a high percentage of persons infected with M. \*\*\*tuberculosis\*\*\* . authors detd. the mol. basis for this widespread recognition by identifying and characterizing a 15-mer peptide, CFP1071-85, that elicited \*\*\*CD8\*\*\* + T IFN-.gamma. prodn. and CTL activity by both CD4+ and cells from persons expressing multiple MHC class II and class I mols., resp. CFP1071-85 contained at least two epitopes, one of 10 aa (peptide T1) and another of 9 aa (peptide T6). T1 was recognized by CD4+ cells in the context of DRB1\*04, DR5\*0101, and DQB1\*03, and by \*\*\*CD8\*\*\* + cells of A2+ donors. T6 elicited responses by CD4+ cells in the context of \*\*\*CD8\*\*\* + cells of B35+ donors. Deleting DRB1\*04 and DQB1\*03, and by a single amino acid from the amino or carboxy terminus of either peptide markedly reduced IFN-.gamma. prodn., suggesting that they are minimal epitopes for both CD4+ and \*\*\*CD8\*\*\* + cells. As far as the authors are aware, these are the shortest microbial peptides that have been found to elicit responses by both T cell subpopulations. The capacity of CFP1071-85 to stimulate IFN-.gamma. prodn. and CTL activity by CD4+ and \*\*\*CD8\*\*\* + cells from persons expressing a spectrum of MHC mols. suggests that this peptide is an excellent candidate for inclusion in a subunit antituberculosis vaccine.
- RE.CNT 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT
- L3 ANSWER 3 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN
- AN 2002:716868 CAPLUS
- DN 137:246533
- TI Mycobacterium \*\*\*tuberculosis\*\*\* epitopes in vaccines and detection of mycobacterial-specific cytotoxic T-cells
- IN \*\*\*Lalvani, Ajit\*\*\*; Pathan, Ansar A.; Hill, Adrian V. S.
- PA UK
- SO U.S. Pat. Appl. Publ., 19 pp., Cont.-in-part of U.S. Ser. No. 467,893, abandoned.

CODEN: USXXCO

DT Patent LA English FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
DT	ия 2000121076		20020010	US 2001-916201	20010727	
ΡI	US 2002131976	Al	20020919	US 2001-916201 US 2003-721798	20010727	
DD 2 T	US 2004141985	A1	20040722 19981223	05 2003-721798	20031126	
PRAI	US 1998-113783P	P				
	US 1999-467893	B2	19991221			
	US 2001-916201	B3	20010727			

- A method of detecting an anti-mycobacterial \*\*\*CD8\*\*\* T cell response AΒ comprising contacting a population of \*\*\*CD8\*\*\* T cells of an individual with one or more peptides selected from the peptides represented by SEQ ID NO: 3, 4, 7, 8, 9, 10, 11 or 12, and, optionally, one or two further peptides represented by SEQ ID NO: 1 and/or 2, wherein one or more of said peptides may be substituted by an analog which binds a T cell receptor which recognizes the corresponding substituted peptide, T cells of the \*\*\*CD8\*\*\* and detg. whether \*\*\*CD8\*\*\* population recognize the peptide(s). The invention also provides a method of vaccinating against infection by a mycobacterium, wherein the vaccination leads to a \*\*\*CD8\*\*\* T cell response, comprising administering (i) a \*\*\*CD8\*\*\* T cell epitope of a mycobacterium protein, (ii) an analog of the epitope which is capable of inhibiting the binding of the epitope to a T cell receptor, (iii) a precursor or (i) or (ii) which is capable of being processed to provide (i) or (ii), or (iv) a polynucleotide which is capable of being expressed to provide (i), (ii) or (iii). The method of detecting \*\*\*CD8\*\*\* T cells is an ELISPOT assay which detects interferon-.gamma., released by the T cells following peptide recognition, using an immobilized anti-IFN-.gamma. antibody.
- L3 ANSWER 4 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN
- AN 2000:651305 CAPLUS
- DN 133:320816
- TI High frequencies of circulating IFN-.gamma.-secreting \*\*\*CD8\*\*\*
  cytotoxic T cells specific for a novel MHC class I-restricted
  Mycobacterium \*\*\*tuberculosis\*\*\* epitope in M. \*\*\*tuberculosis\*\*\*
  -infected subjects without disease
- AU Pathan, Ansar A.; Wilkinson, Katalin A.; Wilkinson, Robert J.; Latif, Mohammed; McShane, Helen; Pasvol, Geoffrey; Hill, Adrian V. S.;

  \*\*\*Lalvani, Ajit\*\*\*
- CS Institute of Molecular Medicine, Nuffield Department of Clinical Medicine, John Radcliffe Hospital, University of Oxford, Oxford, UK
- SO European Journal of Immunology (2000), 30(9), 2713-2721 CODEN: EJIMAF; ISSN: 0014-2980
- PB Wiley-VCH Verlag GmbH
- DT Journal
- LA English
- AB MHC class I-restricted \*\*\*CD8\*\*\* cytotoxic T lymphocytes (CTL) are essential for protective immunity to Mycobacterium \*\*\*tuberculosis\*\*\* in animal models but their role in humans remains unclear. The authors therefore studied subjects who had successfully contained M.
  - \*\*\*tuberculosis\*\*\* infection in vivo, i.e. exposed healthy household contacts and individuals with inactive self-healed pulmonary
  - \*\*\*tuberculosis\*\*\* . Using the ELISPOT assay for IFN-.gamma., the authors screened peptides from ESAT-6, a secreted antigen that is highly specific for M. \*\*\*tuberculosis\*\*\* . The authors identified a novel nonamer epitope: unstimulated peripheral blood-derived \*\*\*CD8\*\*\* T

cells displayed peptide-specific IFN-.gamma. release ex vivo while \*\*\*CD8\*\*\* T cell lines and clones exhibited HLA-A68.02-restricted cytolytic activity and recognized endogenously processed antigen. The frequency of \*\*\*CD8\*\*\* CTL specific for this single M.

\*\*\*tuberculosis\*\*\* epitope, 1/2500 peripheral blood lymphocytes, was equiv. to the combined frequency of all IFN-.gamma.-secreting purified protein deriv.-reactive T cells ex vivo. This highly focused CTL response was maintained in an asymptomatic contact over 2 yr and is the most potent antigen-specific antimycobacterial \*\*\*CD8\*\*\* CTL response hitherto described. Thus, human M. \*\*\*tuberculosis\*\*\* -specific \*\*\*CD8\*\*\* CTL are not necessarily assocd. with active disease per se. Rather, the authors' results are consistent with a protective role for these \*\*\*CD8\*\*\* T cells in the long-term control of  ${\tt M.}$ ESAT-6-specific \*\*\*tuberculosis\*\*\* in vivo in humans.

RE.CNT 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

- L3 ANSWER 5 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN
- AN 1999:31167 CAPLUS
- DN 130:195477
- TI 38000 MW antigen-specific major histocompatibility complex class I restricted interferon-.gamma.-secreting \*\*\*CD8\*\*\* + T cells in healthy contacts of \*\*\*tuberculosis\*\*\*
- AU Wilkinson, R. J.; Zhu, X.; Wilkinson, K. A.; \*\*\*Lalvani, A.\*\*\*; Ivanyi, J.; Pasvol, G.; Vordermeier, H. M.
- CS Tuberculosis and Related Infections Unit, Clinical Sciences Centre, Imperial College School of Medicine, Hammersmith Hospital, London, UK
- SO Immunology (1998), 95(4), 585-590 CODEN: IMMUAM; ISSN: 0019-2805
- PB Blackwell Science Ltd.
- DT Journal
- LA English

AB

\*\*\*CD8\*\*\* + T lymphocytes are required to protect mice against \*\*\*tuberculosis\*\*\* , although in early infection the Mycobacterium mechanism appears not to be via perforin or granzyme-mediated lysis of the infected target, and may be via interferon-.gamma. (IFN-.gamma.) prodn. \*\*\*CD8\*\*\* + T cells specific for the We therefore investigated whether immunoprotective 38 000 MW antigen of M. \*\*\*tuberculosis\*\*\* detected in infected humans. Using a recombinant vaccinia virus expressing the 38 000 MW antigen of M. \*\*\*tuberculosis\*\*\* (rV38) and a control vaccinia virus (rVras) we demonstrated that both viruses stimulated IFN-.gamma. prodn. from freshly isolated peripheral blood mononuclear cells (PBMC) in a 36-h enzyme-linked immunospot assay. Cell depletion and antibody blockade established that the bulk of the 38000 MW antigen-specific IFN-.gamma. response was mediated by \*\*\*CD8\*\*\* +, major histocompatibility complex class I-restricted T cells, whereas the anti-vaccinia virus response was predominantly mediated by CD4+ T cells. In further evaluations PBMC from all seven healthy \*\*\*tuberculosis\*\*\* -exposed contacts had a 38000 MW antigen-specific IFN-.gamma. response, whereas seven patients with untreated sputum-pos. pulmonary

\*\*\*tuberculosis\*\*\* had very low levels of 38000 antigen-specific IFN-.gamma.-producing cells. These preliminary observations demonstrate the utility of recombinant vaccinia viruses in restimulating freshly isolated CD4+ and \*\*\*CD8\*\*\* + T cells. The bias towards a higher frequency of IFN-.gamma.-producing \*\*\*CD8\*\*\* + T cells in contacts rather than patients may indicate a protective role for \*\*\*CD8\*\*\* + cells in human \*\*\*tuberculosis\*\*\* .

## RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

- L3 ANSWER 6 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN
- AN 1998:388685 CAPLUS
- DN 129:26989
- TI Assay method for peptide specific T-cells
- IN \*\*\*Lalvani, Ajit\*\*\* ; Brookes, Roger Hamilton
- PA Isis Innovation Limited, UK; Lalvani, Ajit; Brookes, Roger Hamilton
- SO PCT Int. Appl., 25 pp.
- CODEN: PIXXD2
  DT Patent
- LA English
- FAN.CNT 1

IM.	PATENT NO.			KIND DATE			APPLICATION NO.				DATE								
PI	WO				A1 19980604 US .			WO 1997-GB3222				19971125							
												, GR,							SE
		2272																	
		9850									AU	1998-	5063	2		1	9971	125	
		7283																	
	ΕP	9414	78			A1		1999	0915		EP	1997-	9133	36		1	9971	125	
	ΕP	9414	78			В1		2002	0206										
		R:	AT,	BE,	CH,	DE,	DK,	ES,	FR,	GB,	IT	, LI,	NL,	SE,	ΙE,	FI			
	JΡ	2001	5055	68		Т2		2001	0424		JP	19 <mark>98</mark> -	5244	10		1	9971	125	
	ΕP	1152	012			A1		2001	1107		EP .	2001-	1092	98		1	9971	125	
		R:	ΑT,	BE,	CH,	DE,	DK,	ES,	FR,	GB,	IT	, LI,	NL,	SE,	ΙE,	FI			
	ΑT	2130	68			E		2002	0215		ΑT	1997-	9133	36		1	9971	125	
	ES	2172	773			Т3		2002	1001		ĖS	1997-	9133	36		1	9971	125	
	AU	7650	13			В2		2003	0904		AU	2001-	3344	1		2	0010	402	
PRAI	GB	1996	-244	56		Α		1996	1125										
	ΑU	1998	-506	32		A3		1997	1125										
	ΕP	1997	-913	336		А3		1997	1125										
•	WO	1997	-GB32	222		W		1997	1125										

- AB A method of assaying for peptide-specific T-cells comprises adding peptide to a fluid sample of fresh peripheral blood mononuclear cells, and detecting a cytokine such as interferon-.gamma. produced by T-cells that have been pre-sensitized to the peptide. The assay method is quick and cheap and is expected to be useful for the study of various disease states including Hepatitis B, Hepatitis C, \*\*\*tuberculosis\*\*\*, malaria, HIV and influenza.
- RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT
- L3 ANSWER 7 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN
- AN 1998:33912 CAPLUS
- DN 128:139656
- TI Human cytolytic and interferon .gamma.-secreting \*\*\*CD8\*\*\* + T lymphocytes specific for Mycobacterium \*\*\*tuberculosis\*\*\*
- AU \*\*\*Lalvani, Ajit\*\*\* ; Brookes, Roger; Wilkinson, Robert J.; Malin, Adam S.; Pathan, Ansar A.; Andersen, Peter; Dockrell, Hazel; Pasvol, Geoffrey; Hill, Adrian V. S.
- CS Molecular Immunology Group, Institute of Molecular Medicine, Nuffield Department of Clinical Medicine, John Radcliffe Hospital, University of Oxford, Oxford, OX3 9DU, UK
- SO Proceedings of the National Academy of Sciences of the United States of

America (1998), 95(1), 270-275 CODEN: PNASA6; ISSN: 0027-8424

- PB National Academy of Sciences
- DT Journal
- LA English
- Protective immunity to M. \*\*\*tuberculosis\*\*\* is poorly understood, but AB mounting evidence, at least in animal models, implicates major histocompatibility complex class I-restricted \*\*\*CD8\*\*\* + T cells as an essential component. By using a highly sensitive assay for single cell interferon .gamma. release, the authors screened an array of M. \*\*\*tuberculosis\*\*\* antigen-derived peptides congruent with HLA class I \*\*\*CD8\*\*\* + T cells allele-specific motifs. The authors identified specific for epitopes in the early secretory antigenic target 6 during active \*\*\*tuberculosis\*\*\* , after clin. recovery and in healthy contacts. Unrestimulated cells exhibited peptide-specific interferon .gamma. secretion, whereas lines or clones recognized endogenously processed antigen and showed cytolytic activity. These results provide direct evidence for the involvement of \*\*\*CD8\*\*\* + cytotoxic T \*\*\*tuberculosis\*\*\* lymphocytes in host defense against M. in humans and support current attempts to generate protective cytotoxic T lymphocyte \*\*\*tuberculosis\*\*\* by vaccination. responses against M.
- RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT
- L3 ANSWER 8 OF 13 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
- AN 2005016548 EMBASE
- TI Ex vivo characterization of early secretory antigenic target 6-specific T cells at sites of active disease in pleural \*\*\*tuberculosis\*\*\* .
- AU Wilkinson K.A.; Wilkinson H.J.; Pathan A.; Ewer K.; Prakash M.; Klenerman P.; Maskell N.; Davies R.; Pasvol G.; \*\*\*Lalvani A.\*\*\*
- CS Dr. A. Lalvani, Nuffield Dept. of Clinical Medicine, University of Oxford, John Radcliffe Hospital, Oxford OX3 9DU, United Kingdom. ajit.lalvani@ndm.ox.ac.uk
- SO Clinical Infectious Diseases, (1 Jan 2005) 40/1 (184-187).

  Refs: 14
  ISSN: 1058-4838 CODEN: CIDIEL
- CY United States
- DT Journal; Article
- FS 005 General Pathology and Pathological Anatomy
  015 Chest Diseases, Thoracic Surgery and Tuberculosis
  026 Immunology, Serology and Transplantation
- LA English
- SL English
- AB Presence of early secretory antigenic target-6 (ESAT-6)-specific, interferon-.gamma.-secreting T cells in blood accurately marks

  \*\*\*tuberculosis\*\*\* infection. In tuberculous pleural effusions from 10 patients with \*\*\*tuberculosis\*\*\*, these cells were concentrated a mean of 15-fold (standard deviation, .+-.6-fold), relative to their level in peripheral blood (P = .014), and displayed rapid effector function. Such cells were absent in 8 control patients with nontuberculous pleural disease. The recruitment of ESAT-6-specific T cells to inflamed tuberculous tissue demonstrates their function in vivo and suggests a novel way to diagnose tuberculous pleuritis.
- L3 ANSWER 9 OF 13 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED. on STN

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2002339692 EMBASE
AN
       ***CD8***
                  cytotoxic T cells and the development of new
TI
       ***tuberculosis*** vaccines.
       ***Lalvani A.***
ΑU
    A. Lalvani, Nuffield Dept. of Clinical Medicine, University of Oxford,
CS
     John Radcliffe Hospital, Oxford, United Kingdom
     American Journal of Respiratory and Critical Care Medicine, (15 Sep 2002)
SO
     166/6 (789-790).
     Refs: 12
     ISSN: 1073-449X CODEN: AJCMED
CY
     United States
DT
     Journal; Editorial
FS
     004
             Microbiology
     005
             General Pathology and Pathological Anatomy
     015
             Chest Diseases, Thoracic Surgery and Tuberculosis
     026
             Immunology, Serology and Transplantation
LA
     English
                         MEDLINE on STN
L3
     ANSWER 10 OF 13
AN
     2002470334
                   MEDLINE
DN
     PubMed ID: 12231485
ΤI
       ***CD8***
                   cytotoxic T cells and the development of new
       ***tuberculosis*** vaccines.
     Comment on: Am J Respir Crit Care Med. 2002 Sep 15;166(6):843-8. PubMed
CM
     ID: 12231495
       ***Lalvani Ajit***
ΑU
     American journal of respiratory and critical care medicine, (2002 Sep 15)
so
     166 (6) 789-90.
     Journal code: 9421642. ISSN: 1073-449X.
     United States
CY
DT
     Commentary
     Editorial
LΑ
     English
FS
     Abridged Index Medicus Journals; Priority Journals
EM
     200210
ED
     Entered STN: 20020917
     Last Updated on STN: 20021012
     Entered Medline: 20021011
L3
     ANSWER 11 OF 13 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation.
     on STN
     2003:504916 SCISEARCH
AN
     The Genuine Article (R) Number: 669TR
GΑ
     Identification of M- ***Tuberculosis***
                                               peptides that are recognized by
ΤI
     human CD4+ and ***CD8*** + T-cells from persons expressing different
     HLA alleles
                                              ***Lalvani A*** ; Safi H; Wizel
     Shams H (Reprint); Klucar P; Weis S E;
ΑU
     B; Moonan P K; Ewer K; Barnes P F
     Univ Texas Hlth Ctr, Tyler, TX 75708 USA; Univ N Texas, Hlth Sci Ctr, Ft
CS
     Worth, TX USA; Univ Oxford, John Radcliffe Hosp, Oxford OX3 9DU, England
CYA USA; England
     FASEB JOURNAL, (14 APR 2003) Vol. 17, No. 7, Supp. [S], pp. C27-C27.
     Publisher: FEDERATION AMER SOC EXP BIOL, 9650 ROCKVILLE PIKE, BETHESDA, MD
     20814-3998 USA.
     ISSN: 0892-6638.
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Conference; Journal

English

DT

LΑ

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REC Reference Count: 0
L3
     ANSWER 12 OF 13 USPATFULL on STN
AN
       2004:184102 USPATFULL
         ***Tuberculosis***
TI
                            vaccine
         ***Lalvani, Ajit*** , Oxford, UNITED KINGDOM
IN
       Pathan, Ansar A., Oxford, UNITED KINGDOM
PA
       ISIS INNOVATION LIMITED, Oxford, UNITED KINGDOM (non-U.S. corporation)
       US 2004141985
                               20040722
PΙ
                          A1
ΑI
       US 2003-721798
                          A1
                               20031126 (10)
RLI
       Division of Ser. No. US 2001-916201, filed on 27 Jul 2001, ABANDONED
       Continuation-in-part of Ser. No. US 1999-467893, filed on 21 Dec 1999,
       ABANDONED
PRAI
       US 1998-113783P
                           19981223 (60)
       Utility
DΤ
FS
       APPLICATION
LREP
       NIXON & VANDERHYE, PC, 1100 N GLEBE ROAD, 8TH FLOOR, ARLINGTON, VA,
       22201-4714
       Number of Claims: 27
CLMN
       Exemplary Claim: 1
ECL
DRWN
       4 Drawing Page(s)
LN.CNT 1505
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
                                                     ***CD8***
       A method of detecting an anti-mycobacterial
       response comprising contacting a population of ***CD8***
       an individual with one or more peptides selected from the peptides
       represented by SEQ ID NO: 3, 4, 7, 8, 9, 10, 11 or 12, and, optionally,
       one or two further peptides represented by SEQ ID NO: 1 and/or 2,
       wherein one or more of said peptides may be substituted by an analogue
       which binds a T cell receptor which recognises the corresponding
       substituted peptide, and determining whether ***CD8***
             ***CD8***
                         T cell population recognize the peptide(s).
       the
       The invention also provides a method of vaccinating against infection by
       a mycobacterium, wherein the vaccination leads to a
                                                             ***CD8***
       response, comprising administering (i) a
                                                 ***CD8***
                                                              T cell epitope of
       a mycobacterium protein, (ii) an analogue of the epitope which is
       capable of inhibiting the binding of the epitope to a T cell receptor,
       (iii) a precursor or (i) or (ii) which is capable of being processed to
       provide (i) or (ii), or (iv) a polynucleotide which is capable of being
       expressed to provide (i), (ii) or (iii).
L3
    ANSWER 13 OF 13 USPATFULL on STN
       2004:76621 USPATFULL
ΑN
TI
      Assay to determine efficacy of treatment for mycobacterial infection
         ***Lalvani, Ajit*** , John Radcliffe Hospital Headington, UNITED
IN
       KINGDOM
PΙ
       US 2004058399
                          A1
                               20040325
AΙ
       US 2003-451918
                          A1
                               20031023 (10)
      WO 2002-GB55
                               20020108
PRAI
       GB 2001-432
                           20010108
DT
      Utility
FS
      APPLICATION
      Nixon & Vanderhye, 8th Floor, 1100 North Glebe Road, Arlington, VA,
LREP
       22201-4714
      Number of Claims: 22
CLMN
```

ECL

Exemplary Claim: 1

LN.CNT 1601 CAS INDEXING IS AVAILABLE FOR THIS PATENT. Method of determining the efficacy of treatment for mycobacterial infection in an individual comprising determining in samples from the individual whether the level of T cells specific for a mycobacterial antigen has decreased after the treatment, thereby determining the efficacy of the treatment. => e pathan ansar/au 12 PATHAN A S/AU E2 9 PATHAN A Z/AU **E**3 3 --> PATHAN ANSAR/AU PATHAN ANSAR A/AU E4 16 E5 PATHAN ANSAR AHMED/AU 1 E6 1 PATHAN ARIF/AU E7 1 PATHAN ASAD/AU 24 PATHAN B M/AU E8 PATHAN D I/AU E9 1 E10 15 PATHAN E/AU E11 1 PATHAN E M/AU PATHAN EJAZ/AU E12 1 => s e3-e5 and tuberculosis 16 ("PATHAN ANSAR"/AU OR "PATHAN ANSAR A"/AU OR "PATHAN ANSAR AHMED "/AU) AND TUBERCULOSIS => dup rem 14 PROCESSING COMPLETED FOR L4 13 DUP REM L4 (3 DUPLICATES REMOVED) L5=> d bib ab 1-YOU HAVE REQUESTED DATA FROM 13 ANSWERS - CONTINUE? Y/(N):y L5ANSWER 1 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN AN 2004:1088309 CAPLUS Diagnosis of \*\*\*tuberculosis\*\*\* in South African children with a TΤ T-cell-based assay: a prospective cohort study ΑU Liebeschuetz, Susan; Bamber, Sheila; Ewer, Katie; Deeks, Jonathan; \*\*\*Pathan, Ansar A.\*\*\* ; Lalvani, Ajit CS Ngwelezana Hospital, kwa Zulu-Natal, S. Afr. Lancet (2005), Volume Date 2004, 364(9452), 2196-2203 SO CODEN: LANCAO; ISSN: 0140-6736 PB Elsevier Ltd. DTJournal LA English Background Childhood \*\*\*tuberculosis\*\*\* often presents AB non-specifically and is a common differential diagnosis in high prevalence areas. Current diagnostic tools have poor sensitivity and cannot reliably exclude \*\*\*tuberculosis\*\*\* , so overdiagnosis is common. HIV co-infection exacerbates this problem and accounts for an increasing

proportion of paediatric \*\*\*tuberculosis\*\*\* worldwide. Methods We

assessed the usefulness of a T-cell-based rapid blood test for Mycobacterium \*\*\*tuberculosis\*\*\* infection, the enzyme-linked immunospot assay (ELISPOT), in routine clin. practice. We did a

DRWN

7 Drawing Page(s)

prospective blinded study of 293 African children with suspected \*\*\*tuberculosis\*\*\* in kwaZulu-Natal, a region with high HIV prevalence. Children had full clin. assessment, ELISPOT, and a tuberculin skin test. Test results were compared with final clin. and microbiol. diagnoses. \*\*\*tuberculosis\*\*\* , sensitivity of ELISPOT Results In children with was 83% (95% CI 75-89, n=133), significantly higher (p<0.cntdot.001) than the 63% (54-72) sensitivity of tuberculin skin test (n=116). Sensitivity of tuberculin skin test fell significantly in children younger than 3 years (to 51%), with HIV co-infection (36%), or with malnutrition (44%). Sensitivity of ELISPOT, which was not significantly adversely affected by these factors, was 85%, 73%, and 78%, resp. in these subgroups. children with both test results available, sensitivity of the two tests combined was 91% (85-95). Conclusions Diagnostic sensitivity of ELISPOT is higher than that of the skin test and is less affected by factors frequently assocd. with childhood \*\*\*tuberculosis\*\*\* in developing countries. Used together with the skin test, ELISPOT provides a clin. useful diagnostic sensitivity in African children with suspected \*\*\*tuberculosis\*\*\*

RE.CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

- · L5 ANSWER 2 OF 13 MEDLINE on STN
- AN 2004637267 IN-PROCESS
- DN PubMed ID: 15614710
- TI Ex vivo characterization of early secretory antigenic target 6-specific T cells at sites of active disease in pleural \*\*\*tuberculosis\*\*\*\*.
- AU Wilkinson Katalin A; Wilkinson Robert J; \*\*\*Pathan Ansar\*\*\*; Ewer Katie; Prakash Manyu; Klenerman Paul; Maskell Nick; Davies Robert; Pasvol Geoffrey; Lalvani Ajit
- CS Nuffield Department of Medicine, University of Oxford, John Radcliffe Hospital, Oxford, United Kingdom.
- Clinical infectious diseases: an official publication of the Infectious Diseases Society of America, (2005 Jan 1) 40 (1) 184-7.

  Journal code: 9203213. ISSN: 1537-6591.
- CY United States
- DT Journal; Article; (JOURNAL ARTICLE)
- LA English
- FS IN-PROCESS; NONINDEXED; Priority Journals
- ED Entered STN: 20041223 Last Updated on STN: 20041223
- AB Presence of early secretory antigenic target-6 (ESAT-6)-specific, interferon- gamma -secreting T cells in blood accurately marks

  \*\*\*tuberculosis\*\*\* infection. In tuberculous pleural effusions from 10 patients with \*\*\*tuberculosis\*\*\*, these cells were concentrated a mean of 15-fold (standard deviation, +/-6-fold), relative to their level in peripheral blood (P=.014), and displayed rapid effector function. Such cells were absent in 8 control patients with nontuberculous pleural disease. The recruitment of ESAT-6-specific T cells to inflamed tuberculous tissue demonstrates their function in vivo and suggests a novel way to diagnose tuberculous pleuritis.
- L5 ANSWER 3 OF 13 MEDLINE on STN
- AN 2005059742 IN-PROCESS
- DN PubMed ID: 15687027
- TI Boosting BCG with MVA85A: the first candidate subunit vaccine for \*\*\*tuberculosis\*\*\* in clinical trials.
- AU McShane Helen; \*\*\*Pathan Ansar A\*\*\* ; Sander Clare R; Goonetilleke Nilu

P; Fletcher Helen A; Hill Adrian V S

- CS Centre for Clinical Vaccinology and Tropical Medicine, University of Oxford, Churchill Hospital, Oxford OX3 7LJ, UK.
- SO Tuberculosis (Edinburgh, Scotland), (2005) 85 (1-2) 47-52. Journal code: 100971555. ISSN: 1472-9792.
- CY England: United Kingdom
- DT Journal; Article; (JOURNAL ARTICLE)
- LA English
- FS IN-DATA-REVIEW; IN-PROCESS; NONINDEXED; Priority Journals
- ED Entered STN: 20050203 Last Updated on STN: 20050203
- AB There is an urgent need for an improved vaccine against

\*\*\*tuberculosis\*\*\* . Heterologous prime-boost immunization regimes induce higher levels of cellular immunity than homologous boosting with the same vaccine. Using BCG as the priming immunization in such a regime allows for the retention of the beneficial protective effects of BCG against disseminated disease in childhood. Recombinant poxviruses are powerful boosting agents, for both CD4+ and CD8+ T cells. Here we review the preclinical data from a BCG prime-recombinant modified vaccinia virus Ankara expressing antigen 85A (MVA85A) boost strategy. MVA85A is now in clinical trials in the UK and Africa and the design of these trials, including the ethical and regulatory issues are discussed.

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L5 ANSWER 4 OF 13 USPATFULL on STN
```

AN 2004:184102 USPATFULL

TI \*\*\*Tuberculosis\*\*\* vaccine

IN Lalvani, Ajit, Oxford, UNITED KINGDOM

\*\*\*Pathan, Ansar A.\*\*\* , Oxford, UNITED KINGDOM

PA ISIS INNOVATION LIMITED, Oxford, UNITED KINGDOM (non-U.S. corporation)

PI US 2004141985 A1 20040722

AI US 2003-721798 A1 20031126 (10)

RLI Division of Ser. No. US 2001-916201, filed on 27 Jul 2001, ABANDONED Continuation-in-part of Ser. No. US 1999-467893, filed on 21 Dec 1999, ABANDONED

PRAI US 1998-113783P 19981223 (60)

DT Utility

FS APPLICATION

LREP NIXON & VANDERHYE, PC, 1100 N GLEBE ROAD, 8TH FLOOR, ARLINGTON, VA, 22201-4714

CLMN Number of Claims: 27

ECL Exemplary Claim: 1

DRWN 4 Drawing Page(s)

LN.CNT 1505

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method of detecting an anti-mycobacterial CD8 T cell response comprising contacting a population of CD8 T cells of an individual with one or more peptides selected from the peptides represented by SEQ ID NO: 3, 4, 7, 8, 9, 10, 11 or 12, and, optionally, one or two further peptides represented by SEQ ID NO: 1 and/or 2, wherein one or more of said peptides may be substituted by an analogue which binds a T cell receptor which recognises the corresponding substituted peptide, and determining whether CD8 T cells of the CD8 T cell population recognize the peptide(s).

The invention also provides a method of vaccinating against infection by a mycobacterium, wherein the vaccination leads to a CD8 T cell response, comprising administering (i) a CD8 T cell epitope of a mycobacterium

protein, (ii) an analogue of the epitope which is capable of inhibiting the binding of the epitope to a T cell receptor, (iii) a precursor or (i) or (ii) which is capable of being processed to provide (i) or (ii), or (iv) a polynucleotide which is capable of being expressed to provide (i), (ii) or (iii).

```
L5
    ANSWER 5 OF 13
                       MEDLINE on STN
AN
    2004635658
                   MEDLINE
DN
     PubMed ID: 15610806
                                        in South African children with a
ΤI
     Diagnosis of
                   ***tuberculosis***
     T-cell-based assay: a prospective cohort study.
     Comment in: Lancet. 2005 Jan 8;365(9454):97-8. PubMed ID: 15639273
    Liebeschuetz Susan; Bamber Sheila; Ewer Katie; Deeks Jonathan;
ΑU
***Pathan***
         Ansar A*** ; Lalvani Ajit
  Ngwelezana Hospital, Empangeni, kwaZulu-Natal, South Africa.
     Lancet, (2004 Dec 18) 364 (9452) 2196-203.
     Journal code: 2985213R. ISSN: 1474-547X.
     England: United Kingdom
CY
     Journal; Article; (JOURNAL ARTICLE)
DT
LΑ
     English
FS
    Abridged Index Medicus Journals; Priority Journals
    200501
EM
ED
     Entered STN: 20041222
    Last Updated on STN: 20050120
    Entered Medline: 20050119
     BACKGROUND: Childhood ***tuberculosis*** often presents
AΒ
    non-specifically and is a common differential diagnosis in high prevalence
     areas. Current diagnostic tools have poor sensitivity and cannot reliably
              ***tuberculosis*** , so overdiagnosis is common. HIV
     exclude
     co-infection exacerbates this problem and accounts for an increasing
    proportion of paediatric ***tuberculosis***
                                                   worldwide. METHODS: We
     assessed the usefulness of a T-cell-based rapid blood test for
    Mycobacterium ***tuberculosis*** infection, the enzyme-linked
     immunospot assay (ELISPOT), in routine clinical practice. We did a
    prospective blinded study of 293 African children with suspected
       ***tuberculosis***
                           in kwaZulu-Natal, a region with high HIV prevalence.
     Children had full clinical assessment, ELISPOT, and a tuberculin skin
     test. Test results were compared with final clinical and microbiological
     diagnoses. RESULTS: In children with ***tuberculosis*** , sensitivity
     of ELISPOT was 83% (95% CI 75-89, n=133), significantly higher (p<0.001)
     than the 63% (54-72) sensitivity of tuberculin skin test (n=116).
     Sensitivity of tuberculin skin test fell significantly in children younger
     than 3 years (to 51%), with HIV co-infection (36%), or with malnutrition
     (44%). Sensitivity of ELISPOT, which was not significantly adversely
     affected by these factors, was 85%, 73%, and 78%, respectively in these
     subgroups. In 116 children with both test results available, sensitivity
     of the two tests combined was 91% (85-95). CONCLUSIONS: Diagnostic
     sensitivity of ELISPOT is higher than that of the skin test and is less
     affected by factors frequently associated with childhood
       ***tuberculosis***
                           in developing countries. Used together with the
skin
     test, ELISPOT provides a clinically useful diagnostic sensitivity in
```

L5 ANSWER 6 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1 AN 2004:907345 CAPLUS

African children with suspected \*\*\*tuberculosis\*\*\*

- DN 141:393687
- TI Recombinant modified vaccinia virus Ankara expressing antigen 85A boosts BCG-primed and naturally acquired antimycobacterial immunity in humans
- AU McShane, Helen; \*\*\*Pathan, Ansar A.\*\*\*; Sander, Clare R.; Keating, Sheila M.; Gilbert, Sarah C.; Huygen, Kris; Fletcher, Helen A.; Hill, Adrian V. S.
- CS Centre for Clinical Vaccinology and Tropical Medicine, Churchill Hospital, University of Oxford, University of Oxford, OX5 7LJ, UK
- SO Nature Medicine (New York, NY, United States) (2004), 10(11), 1240-1244 CODEN: NAMEFI; ISSN: 1078-8956
- PB Nature Publishing Group
- DT Journal
- LA English
- Protective immunity against Mycobacterium \*\*\*tuberculosis\*\*\* AB on the generation of a TH1-type cellular immune response, characterized by the secretion of interferon-.gamma. (IFN-.gamma.) from antigen-specific T cells. The induction of potent cellular immune responses by vaccination in humans has proven difficult. Recombinant viral vectors, esp. poxviruses and adenoviruses, are particularly effective at boosting previously primed CD4+ and CD8+ T-cell responses against a no. of intracellular pathogens in animal studies. In the first phase 1 study of \*\*\*tuberculosis\*\*\* , recombinant any candidate subunit vaccine against modified vaccinia virus Ankara (MVA) expressing antigen 85A (MVA85A) was found to induce high levels of antigen-specific IFN-.gamma.-secreting T cells when used alone in bacille Calmette-Guerin (BCG)-naive healthy volunteers. In volunteers who had been vaccinated 0.5-38 years previously with BCG, substantially higher levels of antigen-specific IFN-.gamma.-secreting T cells were induced, and at 24 wk after vaccination these levels were 5-30 times greater than in vaccinees administered a single BCG vaccination. Boosting vaccinations with MVA85A could offer a practical and efficient strategy for enhancing and prolonging antimycobacterial immunity in \*\*\*tuberculosis\*\*\* -endemic areas.
- RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT
- L5 ANSWER 7 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 2
- AN 2003:994513 CAPLUS
- DN 140:58393
- TI CD8+ T cell-mediated suppression of intracellular Mycobacterium

  \*\*\*tuberculosis\*\*\* growth in activated human macrophages
- AU Brookes, Roger H.; \*\*\*Pathan, Ansar A.\*\*\*; McShane, Helen; Hensmann, Meike; Price, David A.; Hill, Adrian V. S.
- CS Nuffield Department of Clinical Medicine, John Radcliffe Hospital, University of Oxford, Oxford, UK
- SO European Journal of Immunology (2003), 33(12), 3293-3302 CODEN: EJIMAF; ISSN: 0014-2980
- PB Wiley-VCH Verlag GmbH & Co. KGaA
- DT Journal
- LA English
- AB Animal models of \*\*\*tuberculosis\*\*\* point to a protective role for MHC class I-restricted CD8+ T cells, yet it is unclear how these cells protect or whether such findings extend to humans. Here the authors report that macrophages infected with Mycobacterium \*\*\*tuberculosis\*\*\*, rapidly process and present an early secreted antigenic target (ESAT-6)-specific HLA class I-restricted CD8+ T cell epitope. When cocultured with CD8+ T cells restricted through classical HLA class I mols. the growth of bacilli within macrophages is significantly impaired after 7 days. This slow

antimycobacterial activity did not correlate with macrophage lysis but required cell contact. The authors also found that inhibitors of apoptosis either had no effect or augmented the CD8-mediated suppressive activity, suggesting that an activation signal might be involved. Indeed the authors show that CD8+ T cells were able to activate macrophages through receptors that include CD95 (Fas). Consistent with these findings the CD8-mediated suppression of mycobacterial growth was partially reversed by Fas blockade. These data identify a previously unrecognized CD8+ T cell-mediated mechanism used to control an intracellular infection of macrophages.

RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

- L5 ANSWER 8 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 3
- AN 2002:716868 CAPLUS
- DN 137:246533
- TI Mycobacterium \*\*\*tuberculosis\*\*\* epitopes in vaccines and detection of mycobacterial-specific cytotoxic T-cells
- IN Lalvani, Ajit; \*\*\*Pathan, Ansar A.\*\*\*; Hill, Adrian V. S.
- PA UK
- SO U.S. Pat. Appl. Publ., 19 pp., Cont.-in-part of U.S. Ser. No. 467,893, abandoned.

  CODEN: USXXCO
- DT Patent
- LA English
- FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE		
D.T.	HG 2002121076	7.1	20020010	HG 2001 016201	20010727		
PΙ	US 2002131976	A1	20020919	US 2001-916201	20010727		
	US 2004141985	A1	20040722	US 2003-721798	20031126		
PRAI	US 1998-113783P	P	19981223				
	US 1999-467893	В2	19991221				
	US 2001-916201	В3	20010727				

- AB A method of detecting an anti-mycobacterial CD8 T cell response comprising contacting a population of CD8 T cells of an individual with one or more peptides selected from the peptides represented by SEQ ID NO: 3, 4, 7, 8, 9, 10, 11 or 12, and, optionally, one or two further peptides represented by SEQ ID NO: 1 and/or 2, wherein one or more of said peptides may be substituted by an analog which binds a T cell receptor which recognizes the corresponding substituted peptide, and detg. whether CD8 T cells of the CD8 T cell population recognize the peptide(s). The invention also provides a method of vaccinating against infection by a mycobacterium, wherein the vaccination leads to a CD8 T cell response, comprising administering (i) a CD8 T cell epitope of a mycobacterium protein, (ii) an analog of the epitope which is capable of inhibiting the binding of the epitope to a T cell receptor, (iii) a precursor or (i) or (ii) which is capable of being processed to provide (i) or (ii), or (iv) a polynucleotide which is capable of being expressed to provide (i), (ii) or (iii). The method of detecting CD8 T cells is an ELISPOT assay which detects interferon-.gamma., released by the T cells following peptide recognition, using an immobilized anti-IFN-.gamma. antibody.
- L5 ANSWER 9 OF 13 MEDLINE on STN
- AN 2002724225 MEDLINE
- DN PubMed ID: 12441800
- TI Rapid detection of active and latent \*\*\*tuberculosis\*\*\* infection in HIV-positive individuals by enumeration of Mycobacterium

\*\*\*tuberculosis\*\*\* -specific T cells.

- CM Comment in: AIDS. 2003 Aug 15;17(12):1859; author reply 1860-1. PubMed ID: 12891078
- AU Chapman Ann L N; Munkanta Mwansa; Wilkinson Katalin A; \*\*\*Pathan Ansar\*\*\*

  \*\*\* A\*\*\*; Ewer Katie; Ayles Helen; Reece William H; Mwinga Alwyn;

  Godfrey-Faussett Peter; Lalvani Ajit
- CS Nuffield Department of Clinical Medicine, University of Oxford, John Radcliffe Hospital, Oxford, UK.
- SO AIDS (London, England), (2002 Nov 22) 16 (17) 2285-93. Journal code: 8710219. ISSN: 0269-9370.
- CY England: United Kingdom
- DT (EVALUATION STUDIES)
  Journal; Article; (JOURNAL ARTICLE)
- LA English
- FS Priority Journals; AIDS
- EM 200301
- ED Entered STN: 20021219
  Last Updated on STN: 20030202
  Entered Medline: 20030131
- AB OBJECTIVES: An accurate test for Mycobacterium \*\*\*tuberculosis\*\*\*
  infection is urgently needed. The tuberculin skin test (TST) lacks
  sensitivity, particularly in HIV-infected individuals, and has poor
  specificity because of antigenic cross-reactivity with Bacillus
  Calmette-Guerin (BCG) vaccination. ESAT-6 and CFP-10 are antigens
  expressed in Mycobacterium \*\*\*tuberculosis\*\*\*, but not in
  Mycobacterium bovis BCG and most environmental mycobacteria. We
  investigated whether T cells specific for these antigens could serve as
  accurate markers of M. \*\*\*tuberculosis\*\*\* infection in an area of high
  \*\*\*tuberculosis\*\*\* and HIV prevalence. METHODS: Using the rapid ex-

vivo

enzyme-linked immunospot (ELISPOT) assay for IFN-gamma, we enumerated T cells specific for ESAT-6, CFP-10 and purified protein derivative (PPD) in \*\*\*tuberculosis\*\*\* patients, 75 healthy blood samples from 50 Zambian Zambian adults, and 40 healthy UK residents. TSTs were performed in 49 healthy Zambian adults. RESULTS: All (100%; n = 11) and 90% (n = 39) of HIV-negative and HIV-positive \*\*\*tuberculosis\*\*\* patients, respectively, had detectable ESAT-6- or CFP-10-specific T cells. ESAT-6/CFP-10-based ELISPOT assay was positive in 37 out of 54 HIV-negative healthy Zambians, suggesting a 69% prevalence of latent M. \*\*\*tuberculosis\*\*\* infection. Fewer HIV-positive Zambians possessed ESAT-6/CFP-10-specific T cells, but the impact of HIV infection was less on this assay than on the PPD-based ELISPOT or TST. CONCLUSION: The ESAT-6/CFP-10-based ELISPOT assay detects active \*\*\*tuberculosis\*\*\* HIV-positive individuals with high sensitivity. It is more specific, and possibly more sensitive, than PPD-based methods of detecting latent M. \*\*\*tuberculosis\*\*\* infection, and may potentially improve the targeting of isoniazid preventative therapy to HIV-positive individuals with latent \*\*\*tuberculosis\*\*\* infection.

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- L5 ANSWER 10 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN
- AN 2001:801028 CAPLUS
- DN 136:83812
- TI Direct ex vivo analysis of antigen-specific IFN-.gamma.-secreting CD4 T cells in Mycobacterium \*\*\*tuberculosis\*\*\* -infected individuals: associations with clinical disease state and effect of treatment
- AU \*\*\*Pathan, Ansar A.\*\*\* ; Wilkinson, Katalin A.; Klenerman, Paul;

```
McShane, Helen; Davidson, Robert N.; Pasvol, Geoffrey; Hill, Adrian V. S.;
     Lalvani, Ajit
     Nuffield Department of Clinical Medicine, John Radcliffe Hospital,
CS
     University of Oxford, Oxford, OX3 9DU, UK
     Journal of Immunology (2001), 167(9), 5217-5225
SO
     CODEN: JOIMA3; ISSN: 0022-1767
     American Association of Immunologists
PB
\mathbf{DT}
     Journal
     English
LА
     The wide spectrum of clin. outcomes following infection with Mycobacterium
ΑB
       ***tuberculosis***
                            is largely detd. by the host immune response;
     therefore, the authors studied several clin. defined groups of individuals
     that differ in their ability to contain the bacillus. To quantitate M.
       ***tuberculosis*** -specific T cells directly ex vivo, the authors
     enumerated IFN-.gamma.-secreting CD4 T cells specific for ESAT-6, a
     secreted Ag that is highly specific for M. ***tuberculosis*** , and a
     target of protective immune responses in animal models. The authors found
     that frequencies of circulating ESAT-6 peptide-specific
     IFN-.gamma.-secreting CD4 T cells were higher in latently infected healthy
     contacts and subjects with minimal disease and low bacterial burdens than
     in patients with culture-pos. active pulmonary ***tuberculosis***
     (and, resp.). Importantly, the frequency of these Ag-specific CD4 T cells
     fell progressively in all groups with treatment, suggesting that the lower
     responses in patients with more extensive disease were not due to
       ***tuberculosis*** -induced immune suppression. This population of M.
       ***tuberculosis*** Ag-specific Th1-type CD4 T cells appears to
correlate
     with clin. phenotype and declines during successful therapy; these
     features are consistent with a role for these T cells in the containment
            ***tuberculosis***
                                 in vivo. Such findings may assist in the
                                                         vaccine candidates.
     design and evaluation of novel
                                      ***tuberculosis***
              THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE.CNT 48
              ALL CITATIONS AVAILABLE IN THE RE FORMAT
L5
    ANSWER 11 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN
ΑN
     2000:314729 CAPLUS
DN
     132:320929
                           ***tuberculosis***
ΤI
     Test for diagnosis of
     Lalvani, Ajit; ***Pathan, Ansar Ahmed***
IN
PA
     Isis Innovation Limited, UK
SO
     PCT Int. Appl., 34 pp.
     CODEN: PIXXD2
DT
     Patent
LА
     English
FAN.CNT 1
                         KIND
                                                                   DATE
     PATENT NO.
                                DATE
                                            APPLICATION NO.
     ______
                         ____
                                _____
                                            ______
                         A2
                                20000511
                                            WO 1999-GB3635
                                                                   19991103
PΙ
     WO 2000026248
                         Α3
                                20011011
     WO 2000026248
         W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,
             CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,
             IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,
             MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,
             SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
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DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,

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CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
                                20000511
                                            CA 1999-2348475
     CA 2348475
                                                                    19991103
                          AA
    AU 9964809
                                20000522
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                          A1
    BR 9915055
                                20010807
                                            BR 1999-15055
                          Α
                                                                    19991103
                                            EP 1999-952697
                                                                    19991103
    EP 1144447
                          A2
                                20011017
                                20020306
    EP 1144447
                          A3
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO
                                            JP 2000-579635
     JP 2002532064
                          Т2
                                20021002
                                                                    19991103
     ZA 2001003356
                          Α
                                20020124
                                            ZA 2001-3356
                                                                    20010425
PRAI GB 1998-24213
                          Α
                                19981104
                         Ρ
    US 1998-107004P
                                19981104
    WO 1999-GB3635
                          W
                                19991103
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- AB The authors disclose a method of diagnosing infection or exposure to Mycobacterium \*\*\*tuberculosis\*\*\*. The method is comprised of (1) contacting a population of T cells from the host with one or more peptides or peptide analogs derived from ESAT-6 and (2) detg. whether the T cells recognize the peptide(s) and/or analog(s) using ELISPOT.
- L5 ANSWER 12 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN
- AN 2000:651305 CAPLUS
- DN 133:320816
- TI High frequencies of circulating IFN-.gamma.-secreting CD8 cytotoxic T cells specific for a novel MHC class I-restricted Mycobacterium

  \*\*\*tuberculosis\*\*\* epitope in M. \*\*\*tuberculosis\*\*\* -infected subjects without disease
- AU \*\*\*Pathan, Ansar A.\*\*\*; Wilkinson, Katalin A.; Wilkinson, Robert J.; Latif, Mohammed; McShane, Helen; Pasvol, Geoffrey; Hill, Adrian V. S.; Lalvani, Ajit
- CS Institute of Molecular Medicine, Nuffield Department of Clinical Medicine, John Radcliffe Hospital, University of Oxford, Oxford, UK
- SO European Journal of Immunology (2000), 30(9), 2713-2721 CODEN: EJIMAF; ISSN: 0014-2980
- PB Wiley-VCH Verlag GmbH
- DT Journal
- LA English
- MHC class I-restricted CD8 cytotoxic T lymphocytes (CTL) are essential for AB protective immunity to Mycobacterium \*\*\*tuberculosis\*\*\* in animal models but their role in humans remains unclear. The authors therefore studied subjects who had successfully contained M. \*\*\*tuberculosis\*\*\* infection in vivo, i.e. exposed healthy household contacts and individuals with inactive self-healed pulmonary \*\*\*tuberculosis\*\*\* . Using the ELISPOT assay for IFN-.gamma., the authors screened peptides from ESAT-6, a secreted antigen that is highly specific for M. \*\*\*tuberculosis\*\*\* The authors identified a novel nonamer epitope: unstimulated peripheral blood-derived CD8 T cells displayed peptide-specific IFN-.gamma. release ex vivo while CD8 T cell lines and clones exhibited HLA-A68.02-restricted cytolytic activity and recognized endogenously processed antigen. frequency of CD8 CTL specific for this single M. \*\*\*tuberculosis\*\*\* epitope, 1/2500 peripheral blood lymphocytes, was equiv. to the combined frequency of all IFN-.gamma.-secreting purified protein deriv.-reactive T cells ex vivo. This highly focused CTL response was maintained in an asymptomatic contact over 2 yr and is the most potent antigen-specific antimycobacterial CD8 CTL response hitherto described. Thus, human M. \*\*\*tuberculosis\*\*\* -specific CD8 CTL are not necessarily assocd. with active disease per se. Rather, the authors' results are consistent with a

protective role for these ESAT-6-specific CD8 T cells in the long-term

control of M. \*\*\*tuberculosis\*\*\* in vivo in humans.

RE.CNT 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

- L5 ANSWER 13 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN
- AN 1998:33912 CAPLUS
- DN 128:139656
- TI Human cytolytic and interferon .gamma.-secreting CD8+ T lymphocytes specific for Mycobacterium \*\*\*tuberculosis\*\*\*
- AU Lalvani, Ajit; Brookes, Roger; Wilkinson, Robert J.; Malin, Adam S.;

  \*\*\*Pathan, Ansar A.\*\*\*; Andersen, Peter; Dockrell, Hazel; Pasvol,
  Geoffrey; Hill, Adrian V. S.
- CS Molecular Immunology Group, Institute of Molecular Medicine, Nuffield Department of Clinical Medicine, John Radcliffe Hospital, University of Oxford, Oxford, OX3 9DU, UK
- Proceedings of the National Academy of Sciences of the United States of America (1998), 95(1), 270-275 CODEN: PNASA6; ISSN: 0027-8424
- PB National Academy of Sciences
- DT Journal
- LA English
- AB Protective immunity to M. \*\*\*tuberculosis\*\*\* is poorly understood, but mounting evidence, at least in animal models, implicates major histocompatibility complex class I-restricted CD8+ T cells as an essential component. By using a highly sensitive assay for single cell interferon .gamma. release, the authors screened an array of M. \*\*\*tuberculosis\*\*\* antigen-derived peptides congruent with HLA class I allele-specific motifs. The authors identified CD8+ T cells specific for epitopes in the early secretory antigenic target 6 during active \*\*\*tuberculosis\*\*\*, after clin. recovery and in healthy contacts. Unrestimulated cells exhibited peptide-specific interferon .gamma. secretion, whereas lines or clones recognized endogenously processed antigen and showed cytolytic activity. These results provide direct evidence for the involvement of CD8+ cytotoxic T lymphocytes in host defense against M.
  - \*\*\*tuberculosis\*\*\* in humans and support current attempts to generate protective cytotoxic T lymphocyte responses against M.

    \*\*\*tuberculosis\*\*\* by vaccination.
- RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD
  ALL CITATIONS AVAILABLE IN THE RE FORMAT

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=> s 19 and cytokine?
         1972 L9 AND CYTOKINE?
L10
=> s 110 and interferon?
         1555 L10 AND INTERFERON?
L11
=> s 111 and antibod?
         1547 L11 AND ANTIBOD?
L12
=> s 112 and peptide?
         1493 L12 AND PEPTIDE?
L13
=> s 113 and (cd8?/ti or cd8?/ab)
'AB' IS NOT A VALID FIELD CODE
'AB' IS NOT A VALID FIELD CODE
'AB' IS NOT A VALID FIELD CODE
L14
            21 L13 AND (CD8?/TI OR CD8?/AB)
=> d bib ab 1-
YOU HAVE REQUESTED DATA FROM 21 ANSWERS - CONTINUE? Y/(N):y
L14 ANSWER 1 OF 21 USPATFULL on STN
AN
       2005:31676 USPATFULL
       Methods and materials relating to ***cd84*** -like polypeptides and
TI
       polynucleotides
IN
       Kuo, Chiaoyun, San Jose, CA, UNITED STATES
       Boyle, Bryan J., San Francisco, CA, UNITED STATES
       Wang, Jian-Rui, San Jose, CA, UNITED STATES
       Tang, Y. Tom, San Jose, CA, UNITED STATES
       Liu, Chenghua, San Jose, CA, UNITED STATES
       Drmanac, Radoje T., Palo Alto, CA, UNITED STATES
ΡI
       US 2005027114
                        A1
                               20050203
                               20031003 (10)
       US 2003-311829
ΑI
                         A1
       WO 2001-US2613
                               20010125
       Continuation-in-part of Ser. No. US 2000-491404, filed on 25 Jan 2000,
RLI
       ABANDONED Continuation-in-part of Ser. No. US 2000-645476, filed on 24
       Aug 2000, ABANDONED Continuation-in-part of Ser. No. US 2000-491404,
       filed on 25 Jan 2000, ABANDONED
DT
       Utility
      APPLICATION
FS
       NUVELO, 675 ALMANOR AVE., SUNNYVALE, CA, 94085
LREP
CLMN
      Number of Claims: 30
ECL
       Exemplary Claim: 1
DRWN
       2 Drawing Page(s)
LN.CNT 5461
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AΒ
       The invention provides novel polynucleotides and polypeptides encoded by
       such polynucleotides and mutants or variants thereof that correspond to
                                ***CD84*** -like polypeptide. These
       a novel human secreted
       polynucleotides comprise nucleic acid sequences isolated from cDNA
       library from human spleen (Hyseq clone identification numbers 2938352
       (SEQ ID NO: 1)). Other aspects of the invention include vectors
       containing processes for producing novel human secreted
       -like polypeptides, and ***antibodies*** specific for such
       polyeptides.
```

```
2004:306513 USPATFULL
AN
       Methods of inducing a cytotoxic immune response and recormbinant simian
TI
       adenovirus compositions useful therein
       Ertl, Hildeghund C. J., Villanova, PA, UNITED STATES
IN
       Wilson, James M., Gladwyne, PA, UNITED STATES
PΙ
       US 2004241181
                          A1
                               20041202
ΑI
       US 2003-480793
                          A1
                               20031219 (10)
       WO 2002-US15239
                               20020513
PRAI
       US 2001-300131P
                           20010622 (60)
       US 2001-304843P
                           20010712 (60) -
DT
       Utility.
FS
       APPLICATION
LREP
       HOWSON AND HOWSON, ONE SPRING HOUSE CORPORATION CENTER, BOX 457, 321
       NORRISTOWN ROAD, SPRING HOUSE, PA, 19477
       Number of Claims: 18
CLMN
       Exemplary Claim: CLM-001-2
ECL
DRWN
       2 Drawing Page(s)
LN.CNT 2227
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
                              ***CD8*** + T-cell response against a selected
       A method of inducing a
       molecule by delivering the molecule via a recombinant simian adenovirus
       is provided. Also provided are methods of inducing
                                                            ***interferon***
       -.alpha. and ***interferon*** -.beta. by delivering a recombinant
       simian adenovirus to a subject. The methods of the invention are
       particularly well suited for prophylaxis and treatment of infections
       with human immunodeficiency virus and human papilloma virus, among
       others, and cancer therapy.
L14 ANSWER 3 OF 21 USPATFULL on STN
       2004:273307 USPATFULL
AN
ΤI
       Methods and reagents for vaccination which generate a ***CD8***
       cell immune response
       McMichael, Andrew, Beckley, UNITED KINGDOM
ΙN
       Hill, Adrian V.S., Old Headington, UNITED KINGDOM
       Gilbert, Sarah C., Headington, UNITED KINGDOM
       Schneider, Jorg, Barton, UNITED KINGDOM
       Plebanski, Magdalena, Melbourne, AUSTRALIA
       Hanke, Tomas, Old Marston, UNITED KINGDOM
       Smith, Geoffrey L., Oxford, UNITED KINGDOM
       Blanchard, Tom, Banjul, GAMBIA
PA
       Oxxon Pharmaccines Limited, Oxford, UNITED KINGDOM (non-U.S.
       corporation)
PΙ
       US 2004213799
                          A1
                               20041028
ΑI
       US 2003-686943
                          A1
                               20031016 (10)
RLI
       Continuation of Ser. No. US 1999-454204, filed on 9 Dec 1999, GRANTED,
       Pat. No. US 6663871 Continuation of Ser. No. WO 1998-GB1681, filed on 9
       Jun 1998, UNKNOWN
PRAI
       GB 1997-11957
                           19970609
DТ
      Utility
FS
       APPLICATION
LREP
       HAMILTON, BROOK, SMITH & REYNOLDS, P.C., 530 VIRGINIA ROAD, P.O. BOX
       9133, CONCORD, MA, 01742-9133
      Number of Claims: 35
CLMN
ECL
       Exemplary Claim: 1
       18 Drawing Page(s)
DRWN
LN.CNT 2589
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
```

New methods and reagents for vaccination are described which generate a AB T cell immune response against malarial and other antigens such as viral and tumour antigens. Novel vaccination regimes are described which employ a priming composition and a boosting composition, the boosting composition comprising a non-replicating or replication-impaired pox virus vector carrying at least one T cell epitope which is also present in the priming composition. ANSWER 4 OF 21 USPATFULL on STN L14 2004:253824 USPATFULL ΔN Methods and reagents for vaccination which generate a \*\*\*CD8\*\*\* ΤI cell immune response IN McMichael, Andrew, Beckley, UNITED KINGDOM Hill, Adrian V.S., Old Headington, UNITED KINGDOM Gilbert, Sarah C., Headington, UNITED KINGDOM Schneider, Jorg, Barton, UNITED KINGDOM Plebanski, Magdalena, Melbourne, AUSTRALIA Hanke, Tomas, Old Marston, UNITED KINGDOM Smith, Geoffrey L., Oxford, UNITED KINGDOM Blanchard, Tom, Banjul, GAMBIA Oxxon Therapeutics Ltd. (non-U.S. corporation) PA PΙ US 2004197349 A1 20041007 AΙ US 2004-833744 A1 . 20040428 (10) Continuation of Ser. No. US 2003-686943, filed on 16 Oct 2003, PENDING RLI Continuation of Ser. No. US 1999-454204, filed on 9 Dec 1999, GRANTED, Pat. No. US 6663871 Continuation of Ser. No. WO 1998-GB1681, filed on 9 Jun 1998, UNKNOWN Continuation of Ser. No. US 2003-653624, filed on 2 Sep 2003, PENDING Division of Ser. No. US 1999-454204, filed on 9 Dec 1999, GRANTED, Pat. No. US 6663871 Continuation of Ser. No. WO 1998-GB1681, filed on 9 Jun 1998, UNKNOWN PRAI GB 1997-11957 19970609 DTUtility FS APPLICATION HAMILTON, BROOK, SMITH & REYNOLDS, P.C., 530 VIRGINIA ROAD, P.O. BOX LREP 9133, CONCORD, MA, 01742-9133 Number of Claims: 22 CLMN ECL Exemplary Claim: 1 DRWN 18 Drawing Page(s) LN.CNT 2566 CAS INDEXING IS AVAILABLE FOR THIS PATENT. AΒ New methods and reagents for vaccination are described which generate a T cell immune response against malarial and other antigens such as viral and tumour antigens. Novel vaccination regimes are described which employ a priming composition and a boosting composition, the boosting composition comprising a non-replicating or replication-impaired pox virus vector carrying at least one T cell epitope which is also present in the priming composition. L14 ANSWER 5 OF 21 USPATFULL on STN AN 2004:246678 USPATFULL Methods and reagents for vaccination which generate a \*\*\*CD8\*\*\* ΤI cell immune response

McMichael, Andrew, Oxford, UNITED KINGDOM Hill, Adrian V.S., Oxford, UNITED KINGDOM Gilbert, Sarah C., Oxford, UNITED KINGDOM Schneider, Jorg, Oxford, UNITED KINGDOM Plebanski, Magdalena, Melbourne, AUSTRALIA

IN

Hanke, Tomas, Oxford, UNITED KINGDOM Smith, Geoffrey L., Oxford, UNITED KINGDOM Blanchard, Tom, Banjul, GAMBIA

PA Oxxon Therapeutics Ltd. (non-U.S. corporation)

PI US 2004191272 A1 20040930

AI US 2004-833745 A1 20040428 (10)

RLI Continuation of Ser. No. US 2003-686943, filed on 16 Oct 2003, PENDING Continuation of Ser. No. US 1999-454204, filed on 9 Dec 1999, GRANTED, Pat. No. US 6663871 Continuation of Ser. No. WO 1998-GB1681, filed on 9 Jun 1998, UNKNOWN Continuation of Ser. No. US 2003-653624, filed on 2 Sep 2003, PENDING Division of Ser. No. US 1999-454204, filed on 9 Dec 1999, GRANTED, Pat. No. US 6663871 Continuation of Ser. No. WO 1998-GB1681, filed on 9 Jun 1998, UNKNOWN

PRAI GB 1997-11957 19970609

DT Utility

FS APPLICATION

LREP HAMILTON, BROOK, SMITH & REYNOLDS, P.C., 530 VIRGINIA ROAD, P.O. BOX 9133, CONCORD, MA, 01742-9133

CLMN Number of Claims: 21
ECL Exemplary Claim: 1
DRWN 18 Drawing Page(s)

LN.CNT 2553

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB New methods and reagents for vaccination are described which generate a

\*\*\*CD8\*\*\* T cell immune response against malarial and other antigens
such as viral and tumour antigens. Novel vaccination regimes are
described which employ a priming composition and a boosting composition,
the boosting composition comprising a non-replicating or
replication-impaired pox virus vector carrying at least one \*\*\*CD8\*\*\*
T cell epitope which is also present in the priming composition.

L14 ANSWER 6 OF 21 USPATFULL on STN

AN 2004:226980 USPATFULL

TI Methods and reagents for vaccination which generate a \*\*\*CD8\*\*\* T cell immune response

IN McMichael, Andrew, Beckley, UNITED KINGDOM
Hill, Adrian V.S., Old Headington, UNITED KINGDOM
Gilbert, Sarah C., Headington, UNITED KINGDOM
Schneider, Jorg, Barton, UNITED KINGDOM
Plebanski, Magdalena, Melbourne, AUSTRALIA
Hanke, Tomas, Old Marston, UNITED KINGDOM
Smith, Geoffrey L., Oxford, UNITED KINGDOM
Blanchard, Tom, Banjul, GAMBIA

PA Oxxon Therapeutics Ltd. (non-U.S. corporation)

PI US 2004175365 A1 20040909

AI US 2004-833439 A1 20040428 (10)

RLI Continuation of Ser. No. US 2003-686943, filed on 16 Oct 2003, PENDING Continuation of Ser. No. US 1999-454204, filed on 9 Dec 1999, GRANTED, Pat. No. US 6663871 Continuation of Ser. No. WO 1998-GB1681, filed on 9 Jun 1998, UNKNOWN Continuation of Ser. No. US 2003-653624, filed on 2 Sep 2003, PENDING Division of Ser. No. US 1999-454204, filed on 9 Dec 1999, GRANTED, Pat. No. US 6663871 Continuation of Ser. No. WO 1998-GB1681, filed on 9 Jun 1998, UNKNOWN

PRAI GB 1997-11957 19970609

DT Utility

FS APPLICATION

LREP HAMILTON, BROOK, SMITH & REYNOLDS, P.C., 530 VIRGINIA ROAD, P.O. BOX

9133, CONCORD, MA, 01742-9133

CLMN Number of Claims: 20

ECL Exemplary Claim: 1

DRWN 18 Drawing Page(s)

LN.CNT 2548

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB New methods and reagents for vaccination are described which generate a \*\*\*CD8\*\*\* T cell immune response against malarial and other antigens such as viral and tumour antigens. Novel vaccination regimes are described which employ a priming composition and a boosting composition, the boosting composition comprising a non-replicating or replication-impaired pox virus vector carrying at least one \*\*\*CD8\*\*\* T cell epitope which is also present in the priming composition.

L14 ANSWER 7 OF 21 USPATFULL on STN

AN 2004:184102 USPATFULL

TI \*\*\*Tuberculosis\*\*\* vaccine

IN Lalvani, Ajit, Oxford, UNITED KINGDOM
Pathan, Ansar A., Oxford, UNITED KINGDOM

PA ISIS INNOVATION LIMITED, Oxford, UNITED KINGDOM (non-U.S. corporation)

PI US 2004141985 A1 20040722

AI US 2003-721798 A1 20031126 (10)

RLI Division of Ser. No. US 2001-916201, filed on 27 Jul 2001, ABANDONED Continuation-in-part of Ser. No. US 1999-467893, filed on 21 Dec 1999, ABANDONED

PRAI US 1998-113783P 19981223 (60)

DT Utility

FS APPLICATION

LREP NIXON & VANDERHYE, PC, 1100 N GLEBE ROAD, 8TH FLOOR, ARLINGTON, VA, 22201-4714

CLMN Number of Claims: 27

ECL Exemplary Claim: 1
DRWN 4 Drawing Page(s)

LN.CNT 1505

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method of \*\*\*detecting\*\*\* an anti-mycobacterial \*\*\*CD8\*\*\* T cell response comprising contacting a population of \*\*\*CD8\*\*\* T cells of an individual with one or more \*\*\*peptides\*\*\* selected from the \*\*\*peptides\*\*\* represented by SEQ ID NO: 3, 4, 7, 8, 9, 10, 11 or 12, and, optionally, one or two further \*\*\*peptides\*\*\* represented by SEQ ID NO: 1 and/or 2, wherein one or more of said \*\*\*peptides\*\*\* may be substituted by an analogue which binds a T cell receptor which recognises the corresponding substituted \*\*\*peptide\*\*\*, and determining whether \*\*\*CD8\*\*\* T cells of the \*\*\*CD8\*\*\* T cell population recognize the \*\*\*peptide\*\*\* (s).

The invention also provides a method of vaccinating against infection by a mycobacterium, wherein the vaccination leads to a \*\*\*CD8\*\*\* T cell response, comprising administering (i) a \*\*\*CD8\*\*\* T cell epitope of a mycobacterium protein, (ii) an analogue of the epitope which is capable of inhibiting the binding of the epitope to a T cell receptor, (iii) a precursor or (i) or (ii) which is capable of being processed to provide (i) or (ii), or (iv) a polynucleotide which is capable of being expressed to provide (i), (ii) or (iii).

L14 ANSWER 8 OF 21 USPATFULL on STN AN 2004:171435 USPATFULL

```
ΤI
       Methods and reagents for vaccination which generate a
                                                                ***CD8***
       cell immune response
       McMichael, Andrew, Beckley, UNITED KINGDOM
IN
       Hill, Adrian V.S., Old Headington, UNITED KINGDOM
       Gilbert, Sarah C., Headington, UNITED KINGDOM
       Schneider, Jorg, Barton, UNITED KINGDOM
       Plebanski, Magdalena, Melbourne, AUSTRALIA
       Hanke, Tomas, Old Marston, UNITED KINGDOM
       Smith, Geoffrey L., Oxford, UNITED KINGDOM
       Blanchard, Tom, Banjul, GAMBIA
                               20040708
PΙ
       US 2004131594
                          A1
ΑI
       US 2003-653624
                          A1
                               20030902 (10)
       Division of Ser. No. US 1999-454204, filed on 9 Dec 1999, GRANTED, Pat.
RLI
       No. US 6663871 Continuation of Ser. No. WO 1998-GB1681, filed on 9 Jun
       1998, UNKNOWN
       GB 1997-11957
                           19970609
PRAI
DT
       Utility
FS
       APPLICATION
       HAMILTON, BROOK, SMITH & REYNOLDS, P.C., 530 VIRGINIA ROAD, P.O. BOX
LREP
       9133, CONCORD, MA, 01742-9133
       Number of Claims: 9
CLMN
ECL
       Exemplary Claim: 1
DRWN
       18 Drawing Page(s)
LN.CNT 2510
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       New methods and reagents for vaccination are described which generate a
AB
                     T cell immune response against malarial and other antigens
       such as viral and tumour antigens. Novel vaccination regimes are
       described which employ a priming composition and a boosting composition,
       the boosting composition comprising a non-replicating or
                                                                      ***CD8***
       replication-impaired pox virus vector carrying at least one
       T cell epitope which is also present in the priming composition.
L14 ANSWER 9 OF 21 USPATFULL on STN
       2004:114006 USPATFULL
AN
ΤI
       Superior molecular vaccine linking the translocation domain of a
       bacterial toxin to an antigen
       Wu, Tzyy-Choou, Stevenson, MD, UNITED STATES
IN
       Hung, Chien-Fu, Baltimore, MD, UNITED STATES.
PI
       US 2004086845
                          Α1
                               20040506
AΤ
       US 2002-115440
                          Α1
                               20020404 (10)
       Continuation-in-part of Ser. No. WO 2000-US41422, filed on 20 Oct 2000,
RLI
       PENDING Continuation-in-part of Ser. No. US 2000-501097, filed on 9 Feb
       2000, PENDING Continuation-in-part of Ser. No. US 1999-421608, filed on
       20 Oct 1999, ABANDONED
PRAI
       US 2001-281003P
                           20010404 (60)
DT
       Utility
FS
       APPLICATION
LREP
       VENABLE, Post Office Box 34385, Washington, DC, 20043-9998
CLMN
       Number of Claims: 85
ECL
       Exemplary Claim: 1
       4 Drawing Page(s)
DRWN
LN.CNT 3328
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       Nucleic acids encoding a chimeric or fusion polypeptide which
       polypeptide comprises a first domain comprising a translocation
       polypeptide; and a second domain comprising at least one antigenic
```

\*\*\*peptide\*\*\* are disclosed. The preferred translocation polypeptide is a bacterial toxin translocation polypeptide, such as domain II of Pseudomonas aeruginosa exotoxin A (ETA(dII)). Such nucleic acids, expression vectors thereof, and cells expressing these vectors are used as vaccine compositions in a method for enhancing an antigen specific immune response, a method of increasing the numbers of \*\*\*CD8\*\*\* .sup.+ CTLs specific for a selected desired antigen in a subject, or a method of inhibiting the growth of a tumor in a subject.

L14 ANSWER 10 OF 21 USPATFULL on STN 2004:94219 USPATFULL AN Cell therapy method for the treatment of tumors TI Leturcq, Didier J., San Diego, CA, UNITED STATES IN Moriarty, Ann M., Poway, CA, UNITED STATES Jackson, Michael R., Del Mar, CA, UNITED STATES Peterson, Per A., Basking Ridge, NJ, UNITED STATES Richard, Jon M., Glenview, IL, UNITED STATES US 2004071671 A1 20040415 PΙ A1 20021107 (10) ΑI US 2002-289566 Continuation-in-part of Ser. No. US 2002-80013, filed on 19 Feb 2002, RLI PENDING PRAI US 2001-270252P 20010220 (60) DTUtility APPLICATION FS PHILIP S. JOHNSON, JOHNSON & JOHNSON, ONE JOHNSON & JOHNSON PLAZA, NEW LREP BRUNSWICK, NJ, 08933-7003 Number of Claims: 21 CLMN ECL Exemplary Claim: 1 DRWN 35 Drawing Page(s) LN.CNT 3072 CAS INDEXING IS AVAILABLE FOR THIS PATENT. T cell responses are often diminished in humans with a compromised ΑB immune system. We have developed a method to isolate, stimulate and expand naive cytotoxic T lymphocyte precursors (CTLp) to antigen-specific effectors, capable of lysing tumor cells in vivo. This ex vivo protocol produces fully functional effectors. Artificial antigen presenting cells (AAPCS; Drosophila melanogaster) transfected with human HLA class I and defined accessory molecules, are used to stimulate .sup.+ T cells from both normal donors and cancer patients. The class I molecules expressed to a high density on the surface of the Drosophila cells are empty, allowing for efficient loading of multiple \*\*\*peptides\*\*\* that results in the generation of polyclonal responses recognizing tumor cells endogenously expressing the specific \*\*\*peptides\*\*\* . The responses generated are robust, antigen-specific and reproducible if the \*\*\*peptide\*\*\* epitope is a defined immunogen. This artificial antigen expression system can be adapted to treat most cancers in a significant majority of the population. L14 ANSWER 11 OF 21 USPATFULL on STN AN 2004:21595 USPATFULL ΤI Lipopeptides containing an \*\*\*interferon\*\*\* -.gamma. fragment, and uses thereof in pharmaceutical compositions Thiam, Kader, Lille, FRANCE ΤN Auriault, Claude, Nomain, FRANCE Gras-Masse, Helene, Merignies, FRANCE Loing, Estelle, Lille, FRANCE

Verwaerde, Claudie, Lille, FRANCE

```
Guillet, Jean Gerard, Vanves, FRANCE
PA
       Institut National de la Sante et de la Recherche Medicale Inserm, Paris
      Cedex, FRANCE (non-U.S. corporation)
       Institut Pasteur de Lille, Lille, FRANCE (non-U.S. corporation)
       Centre National de la Recherche Scientifique, Paris Cedex, FRANCE
       (non-U.S. corporation)
PΙ
      US 6683052
                               20040127
      WO 9940113 19990812
ΑI
      US 2000-601729
                               20001120 (9)
      WO 1999-FR259
                               19990205
PRAI
       FR 1998-1439
                           19980206
DT
      Utility
FS
       GRANTED
      Primary Examiner: Low, Christopher S. F.; Assistant Examiner: Kam,
EXNAM
      Chih-Min
LREP
      Young & Thompson
CLMN
      Number of Claims: 11
ECL
       Exemplary Claim: 1
       16 Drawing Figure(s); 11 Drawing Page(s)
DRWN
LN.CNT 3325
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The invention concerns any lipopeptide characterized in that it
AB
                     ***peptide*** part comprising the ***peptide***
       comprises: a
       sequence consisting of about 30 to about 50 of the last contiguous amino
                     ***interferon*** -.gamma. (IFN-.gamma.) C-terminal end
       acids of the
       of mammals, whereof, if required, the last 3 to 20 amino acids have been
       suppressed; and one or several lipophilic parts comprising C4-C20 chain
       of carbon atoms, saturated or unsaturated, linear or branched, or a
       steroid group. The invention also concerns any lipopeptide such as
       defined above containing one or several ***CD8*** , and/or CD4,
       and/or B epitopes. The invention further concerns medicines or vaccines
       containing any polypeptide such as defined above.
L14 ANSWER 12 OF 21 USPATFULL on STN
       2003:326861 USPATFULL
AN
      Methods and reagents for vaccination which generate a ***CD8***
TI
       cell immune response
IN
      McMichael, Andrew, Beckley, UNITED KINGDOM
       Hill, Adrian V. S., Old Headington, UNITED KINGDOM
       Gilbert, Sarah C., Headington, UNITED KINGDOM
       Schneider, Jorg, Barton, UNITED KINGDOM
       Plebanski, Magdalena, Melbourne, AUSTRALIA
       Hanke, Tomas, Old Marston, UNITED KINGDOM
       Smith, Geoffrey L., Oxford, UNITED KINGDOM
       Blanchard, Tom, Banjul, SOUTH AFRICA
       Oxxon Pharmaccines Ltd., Oxford, UNITED KINGDOM (non-U.S. corporation)
PA
PΙ
       US 6663871
                          в1
                               20031216
ΑI
       US 1999-454204
                            19991209 (9)
       Continuation of Ser. No. WO 1998-GB1681, filed on 9 Jun 1998
RLI
PRAI
       GB 1997-11957
                         19970609
DT
      Utility
FS
       GRANTED
      Primary Examiner: Housel, James; Assistant Examiner: Foley, Shanon
EXNAM
       Hamilton, Brook, Smith & Reynolds, P.C.
LREP
CLMN
      Number of Claims: 20
ECL
       Exemplary Claim: 1
DRWN
       33 Drawing Figure(s); 13 Drawing Page(s)
```

LN.CNT 2605

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB New methods and reagents for vaccination are described which generate a

\*\*\*CD8\*\*\* T cell immune response against malarial and other antigens
such as viral and tumour antigens. Novel vaccination regimes are
described which employ a priming composition and a boosting composition,
the boosting composition comprising a non-replicating or
replication-impaired pox virus vector carrying at least one \*\*\*CD8\*\*\*
T cell epitope which is also present in the priming composition.

L14 ANSWER 13 OF 21 USPATFULL on STN

AN 2003:264840 USPATFULL

TI Use of recombinant hepatitis B core particles to develop vaccines against infectious pathogens and malignancies

IN Zavala, Fidel, New York, NY, UNITED STATES
Birkett, Ashley J., Escondido, CA, UNITED STATES

PI US 2003185854 A1 20031002 AI US 2003-360836 A1 20030207 (10) PRAI US 2002-354963P 20020208 (60)

PRAI US 2002-354963P 20020

DT Utility FS APPLICATION

LREP DARBY & DARBY P.C., P. O. BOX 5257, NEW YORK, NY, 10150-5257

CLMN Number of Claims: 60 ECL Exemplary Claim: 1 DRWN 3 Drawing Page(s)

LN.CNT 2518

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to methods and compositions for augmenting

\*\*\*CD8\*\*\* + T cell responses to an antigen in a mammal, comprising the
use of recombinant hepatitis B core particles (rHEP) to present said
antigen. The invention further relates to a method of boosting the rHEP
particle-induced \*\*\*CD8\*\*\* + T cell responses using secondary
immunization with a recombinant vaccinia virus expressing the same
antigen (rVAC). The methods and compositions of the present invention
can be useful for prophylaxis and treatment of various infectious and
neoplastic diseases.

L14 ANSWER 14 OF 21 USPATFULL on STN

AN 2003:243803 USPATFULL

TI Ex-vivo priming for generating cytotoxic T lymphocytes specific for non-tumor antigens to treat autoimmune and allergic disease

IN Cai, Zeling, San Diego, CA, UNITED STATES
Jackson, Michael R., Del Mar, CA, UNITED STATES
Peterson, Per A., Basking Ridge, NJ, UNITED STATES
Shi, Wei-Xing, San Diego, CA, UNITED STATES
Kong, Yan, Belle Mead, NJ, UNITED STATES
DeGraw, Juli, San Diego, CA, UNITED STATES

PI US 2003170212 A1 20030911 AI US 2002-144188 A1 20020513 (10) PRAI US 2001-291300P 20010515 (60)

DT Utility

FS APPLICATION

LREP Janet E. Reed, Esq., WOODCOCK WASHBURN LLP, 46th Floor, One Liberty Place, Philadelphia, PA, 19103

CLMN Number of Claims: 9
ECL Exemplary Claim: 1
DRWN 26 Drawing Page(s)

LN.CNT 1997

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Cytotoxic T lymphocytes (CTLs) specific for antigenic \*\*\*peptides\*\*\* \*\*\*vitro\*\*\* derived from IgE molecule can be generated in \*\*\*CD8\*\*\* stimulating resting naive T cells with IqE presented by artificial antigen presenting cells. The \*\*\*peptides\*\*\* IgE specific CTLs lyse the target cells loaded with IgE \*\*\*peptides\*\*\* \*\*\*vitro\*\*\* and inhibit antigen specific IgE response in vivo. In in addition, adoptive transfer of the IgE specific CTL to an asthmatic mouse model can inhibit the development of lung inflammation and airway hypersensitivity. IgE specific CTL provides a treatment for allergic asthma and other IgE-mediated allergic diseases. Antigenic \*\*\*peptides\*\*\* identified from non-tumor self-antigens induce

specific

\*\*\*vitro\*\*\* . The CTL induced by cytotoxic T lymphocyte (CTL) in \*\*\*peptides\*\*\* identified from CD40L can kill activated CD4 T cells. \*\*\*vitro\*\*\* generated CTL specific for CD40L inhibit \*\*\*antibody\*\*\* responses of all isotypes in vivo. In CD4-dependent contrast, CTL induced by antigenic \*\*\*peptides\*\*\* derived from IqE specifically inhibit IgE responses, and adoptive transfer of CD40L-specific CTL to NOD mice at early age delay the development of \*\*\*vitro\*\*\* generated CTL specific for diabetes in NOD mice. In non-tumor self-antigens expressed on activated CD4 T cells regulate immune responses in vivo.

L14 ANSWER 15 OF 21 USPATFULL on STN

AN 2003:225324 USPATFULL

TI Use of glycosylceramides as adjuvants for vaccines against infections and cancer

IN Tsuji, Moriya, New York, NY, UNITED STATES
Gonzalez-Aseguinolaza, Gloria, Navarra, SPAIN
Koezuka, Yasuhiko, Gunma, JAPAN

PA NEW YORK UNIVERSITY (U.S. corporation)

PI US 2003157135 A1 20030821

AI US 2002-206155 A1 20020725 (10)

PRAI US 2001-308056P 20010725 (60)

DT Utility

FS APPLICATION

LREP DARBY & DARBY P.C., P. O. BOX 5257, NEW YORK, NY, 10150-5257

CLMN Number of Claims: 64

ECL Exemplary Claim: 1

DRWN 12 Drawing Page(s)

LN.CNT 2684

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to methods and compositions for augmenting an immunogenicity of an antigen in a mammal, comprising administering said antigen together with an adjuvant composition that includes glycosylceramide, preferably .alpha.-galactosylceramide (.alpha.-GalCer). According to the present invention, the use of glycosylceramide as an adjuvant is attributed at least in part to the enhancement and/or extension of antigen-specific Th1-type responses, in particular, \*\*\*CD8\*\*\* + T cell responses. The methods and compositions of the present invention can be useful for prophylaxis and treatment of various infectious and neoplastic diseases.

L14 ANSWER 16 OF 21 USPATFULL on STN

AN 2003:158936 USPATFULL

```
Methods and compositions for modulating interleukin-21 receptor activity
ΤI
       Carter, Laura, Medford, MA, UNITED STATES
IN
       Carreno, Beatriz, Acton, MA, UNITED STATES
       Lowe, Leslie D., Sudbury, MA, UNITED STATES
       Whitters, Matthew J., Hudson, MA, UNITED STATES
       Dunussi, Kyri, Belmont, MA, UNITED STATES
       Collins, Mary, Natick, MA, UNITED STATES
       Ma, Margery, Roxbury, MA, UNITED STATES
       Young, Deborah A., Melrose, MA, UNITED STATES
       Witek, JoAnn S., Acton, MA, UNITED STATES
       Larsen, Glenn, Sudbury, MA, UNITED STATES
       Kasaian, Marion T., Charlestown, MA, UNITED STATES
       Donaldson, Debra D., Medford, MA, UNITED STATES
       Unger, Michelle, Chapel Hill, NC, UNITED STATES
       Wyeth, Madison, NJ (U.S. corporation)
PΑ
PΙ
       US 2003108549
                          A1
                               20030612
       US 2002-264634
                          A1
                               20021004 (10)
ΑI
       Continuation-in-part of Ser. No. US 2001-972218, filed on 4 Oct 2001,
RLI
       PENDING Continuation-in-part of Ser. No. US 2000-569384, filed on 11 May
       2000, PENDING Continuation-in-part of Ser. No. US 2000-560766, filed on
       28 Apr 2000, ABANDONED Continuation of Ser. No. US 1998-40005, filed on
       17 Mar 1998, GRANTED, Pat. No. US 6057128
PRAI
       US 2002-373746P
                           20020417 (60)
DT
       Utility
       APPLICATION
FS
       WYETH, PATENT LAW GROUP, FIVE GIRALDA FARMS, MADISON, NJ, 07940
LREP
       Number of Claims: 28
CLMN
       Exemplary Claim: 1
ECL
DRWN
       47 Drawing Page(s)
LN.CNT 4944
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       Methods and compositions for modulating interleukin-21 (IL-21)/IL-21
AΒ
       receptor (MU-1) activity using agonists or antagonists of IL-21 or IL-21
       receptor ("IL-21R" or "MU-1"), are disclosed. IL-21/IL-21R antagonists
       can be used to induce immune suppression in vivo, e.g., for treating or
       preventing immune cell-associated pathologies (e.g., pathologies
       associated with aberrant activity of one or more of mature T cells
                 ***CD8*** +, mature CD4+ T cells), mature NK cells, B cells,
       macrophages and megakaryocytes, including transplant rejection and
       autoimmune disorders). IL-21/IL-21R agonists can be used by themselves
       or in combination with an antigen, e.g., as an adjuvant (e.g., a vaccine
       adjuvant), to up-regulate an immune response in vivo, e.g., for example,
       for use in treating cancer and infectious disorders.
L14 ANSWER 17 OF 21 USPATFULL on STN
AN
       2003:152969 USPATFULL
TΙ
       Screening methods
IN
       Jakobsen, Bent Karsten, Wantage, UNITED KINGDOM
PA
       AVIDEX LIMITED, Milton, UNITED KINGDOM (non-U.S. corporation)
       US 2003104635
                          A1
                               20030605
PΙ
                               20020702 (10)
ΑI
       US 2002-188444
                          A1
       Continuation-in-part of Ser. No. US 2002-103597, filed on 21 Mar 2002,
RLI
       PENDING Continuation of Ser. No. WO 2000-GB3579, filed on 18 Sep 2000,
       UNKNOWN
PRAI
       GB 1999-22352
                           19990921
DT
       Utility
       APPLICATION
FS
```

```
HALE AND DORR, LLP, 60 STATE STREET, BOSTON, MA, 02109
LREP
CLMN
       Number of Claims: 22
ECL
       Exemplary Claim: 1
DRWN
       23 Drawing Page(s)
LN.CNT 2609
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention provides methods for sequentially screening for
AB
       compounds with the potential to interfere with low affinity
                                                               ***assay***
       receptor-ligand contacts using an interfacial optical
       such as surface plasmon resonance (SPR). The method comprises contacting
       a candidate compound with an immobilized receptor, contacting the
       receptor, which may or may not have the candidate compound bound to it,
                             ***detecting*** by interfacial optical
       with the ligand and
         ***assay*** whether or not the ligand or ligand-compound complex has
       bound to the receptor or receptor-compound complex. If the ligand binds,
       the method shows that the compound does not inhibit the receptor-ligand
       interaction. If the ligand does not bind, the method shows that the
       compound inhibits the receptor-liqand interaction. The method is
       particularly useful for screening for inhibitors of the interaction
       between MHC/ ***peptide***
                                    complex and T cell receptor, MHC/
         ***peptide***
                         complex and ***CD8***
                                                    coreceptor or MHC/
         ***peptide***
                         complex and CD4 coreceptor.
L14 ANSWER 18 OF 21 USPATFULL on STN
       2003:140591 USPATFULL
AN
TI
       Screening methods
       Jakobsen, Bent Karsten, Wantage, UNITED KINGDOM
IN
       AVIDEX LIMITED, Milton, UNITED KINGDOM, OX 14 4RX
PA
PΙ
       US 2003096432
                          A1
                               20030522
       US 2002-103597
                               20020321 (10)
                          A1
AΙ
       Continuation of Ser. No. WO 2000-GB3579, filed on 18 Sep 2000, UNKNOWN
RLI
       GB 1999-22352
                          19990921
PRAI
DT
       Utility
FS
       APPLICATION
       HALE AND DORR, LLP, 60 STATE STREET, BOSTON, MA, 02109
LREP
       Number of Claims: 22
CLMN
       Exemplary Claim: 1
ECL
DRWN
       23 Drawing Page(s)
LN.CNT 2234
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention provides methods for sequentially screening for
       compounds with the potential to interfere with low affinity
       receptor-ligand contacts using an interfacial optical ***assay***
       such as surface plasmon resonance (SPR). The method comprises contacting
       a candidate compound with an immobilised receptor, contacting the
       receptor, which may or may not have the candidate compound bound to it,
                            ***detecting*** by interfacial optical
       with the ligand and
                       whether or not the ligand or ligand-compound complex has
       bound to the receptor or receptor-compound complex. If the ligand binds,
       the method shows that the compound does not inhibit the receptor-ligand
       interaction. If the ligand does not bind, the method shows that the
       compound inhibits the receptor-liqand interaction. The method is
       particularly usefull for screening for inhibitors of the interaction
       between MHC/ ***peptide*** complex and T cell receptor, MHC/
***peptide*** complex and ***CD8*** coreceptor or MHC/
         ***peptide*** complex and CD4 coreceptor.
```

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L14 ANSWER 19 OF 21 USPATFULL on STN
       2003:120162 USPATFULL
AN
                                             to FC alpha receptor ( ***CD89***
TI
       Human monoclonal
                        ***antibodies***
       Hudson, Debra, Livermore, CA, UNITED STATES
IN
       van Dijk, Marcus A., Bilthoven, NETHERLANDS
       van de Winkel, Jan G.J., Zeist, NETHERLANDS
                               20030501
PΙ
       US 2003082643
                          A1
       US 2002-73644
                          A1
                               20020211 (10)
AΤ
PRAI
       US 2001-338956P
                           20011105 (60)
       US 2001-268075P
                           20010212 (60)
DT
       Utility
FS
       APPLICATION
       LAHIVE & COCKFIELD, 28 STATE STREET, BOSTON, MA, 02109
LREP
CLMN
       Number of Claims: 51
ECL
       Exemplary Claim: 1
DRWN
       4 Drawing Page(s)
LN.CNT 3363
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
                         ***antibodies***
AB
       Human monoclonal
                                             which bind specifically to Fc
       alpha receptor ( ***CD89*** ), including monoclonal
                                                              ***antibodies***
       which react specifically to Fc receptor for IgA of human effector cells
       are disclosed. The binding agents, e.g.,
                                                 ***antibodies***
       for targeting human effector cells (e.g. macrophages) against a target
       cell (e.g. a cancer cell, an infectious agent, etc.). For this purpose,
                      ***antibodies***
                                        or heteroantibodies can be constructed
       bifunctional
       containing the binding region derived from an anti-Fc-alpha receptor
         ***antibody*** and the binding region of a target-specific
         ***antibody*** . Targeted effector cells can specifically lyse target
       cells.
L14 ANSWER 20 OF 21 USPATFULL on STN
AN
       2003:112518 USPATFULL
ΤI
       Cell therapy method for the treatment of tumors
IN
       Moriarty, Ann, Poway, CA, UNITED STATES
       Leturqc, Didier J., San Diego, CA, UNITED STATES
       Degraw, Juli, San Diego, CA, UNITED STATES
       Jackson, Michael R., Del Mar, CA, UNITED STATES
       Peterson, Per A., Basking Ridge, NJ, UNITED STATES
       Heiskala, Marja, San Diego, CA, UNITED STATES
PΙ
       US 2003077248
                         A1
                               20030424
       US 2002-80013
                               20020219 (10)
ΑI
                         Α1
PRAI
       US 2001-270252P
                          20010220 (60)
DT
       Utility
FS
       APPLICATION
LREP
       Philip S. Johnson, Esq., Johnson & Johnson & Johnson Plaza,
      New Brunswick, NJ, 08933-7003
CLMN
       Number of Claims: 23
ECL
       Exemplary Claim: 1
DRWN
       29 Drawing Page(s)
LN.CNT 1964
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       T cell responses are often diminished in humans with a compromised
       immune system. We have developed a method to isolate, stimulate and
       expand naive cytotoxic T lymphocyte precursors (CTLp) to
       antigen-specific effectors, capable of lysing tumor cells in vivo. This
       ex vivo protocol produces fully functional effectors. Artificial antigen
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presenting cells (AAPCs; Drosophila melanogaster) transfected with human HLA class I and defined accessory molecules, are used to stimulate .sup.+ T cells from both normal donors and cancer patients. The class I molecules expressed to a high density on the surface of the Drosophila cells are empty, allowing for efficient loading of multiple \*\*\*peptides\*\*\* that results in the generation of polyclonal responses recognizing tumor cells endogenously expressing the specific \*\*\*peptides\*\*\* . The responses generated are robust, antigen-specific \*\*\*peptide\*\*\* epitope is a defined and reproducible if the · immunogen. This artificial antigen expression system can be adapted to

treat most cancers in a significant majority of the population. L14 ANSWER 21 OF 21 USPATFULL on STN 2003:57064 USPATFULL ANΤI Activation and protection of T-cells (CD4+ and \*\*\*CD8\*\*\* +) using an H2 receptor agonist and other T-cell activating agents IN Hellstrand, Kristoffer, Goteborg, SWEDEN Hermodsson, Svante, Molndal, SWEDEN Gehlsen, Kurt R., Encinitas, CA, UNITED STATES 20030227 PΙ US 2003039628 Α1 ΑI US 2002-265521 Α1 20021003 (10) RLI Continuation of Ser. No. US 1998-139281, filed on 24 Aug 1998, ABANDONED DΤ Utility FS APPLICATION KNOBBE MARTENS OLSON & BEAR LLP, 2040 MAIN STREET, FOURTEENTH FLOOR, LREP IRVINE, CA, 92614 Number of Claims: 26 CLMN Exemplary Claim: 1 ECLDRWN 9 Drawing Page(s) LN.CNT 1607 CAS INDEXING IS AVAILABLE FOR THIS PATENT. AΒ The present invention relates to a method for facilitating activation of T-cells in a patient, comprising: identifying a patient in need of enhanced T-cell activity, administering an effective amount of a T-cell activating composition to the patient, and administering an effective amount of a compound that inhibits the production or release of

intercellular reactive oxygen metabolites (ROM) to the patient. The present invention further relates to the use of H.sub.2-receptor agonists to augment the effectiveness of vaccines.

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'AB' IS NOT A VALID FIELD CODE
'AB' IS NOT A VALID FIELD CODE
L15
            28 L13 AND (TUBERCULOSIS/TI OR TUBERCULOSIS/AB)
YOU HAVE REQUESTED DATA FROM 28 ANSWERS - CONTINUE? Y/(N):y
L15
    ANSWER 1 OF 28 USPATFULL on STN
       2004:313952 USPATFULL
ΑN
TΙ
      Methods and compounds for the treatment of immunologically-mediated
       diseases using Mycobacterium vaccae
IN
      Watson, James D., St. Helliers, NEW ZEALAND
      Tan, Paul L.J., Howick, AUSTRALIA
       Prestidge, Ross L., Grey Lynn, NEW ZEALAND
```

=> s 113 and (tuberculosis/ti or tuberculosis/ab)

'AB' IS NOT A VALID FIELD CODE

Abernethy, Nevin, Meadowbank, NEW ZEALAND GENESIS RESEARCH AND DEVELOPMENT CORPORATION LIMITED, Auckland, NEW PA ZEALAND (non-U.S. corporation) PΙ US 2004247622 A1 20041209 US 2004-825709 20040416 (10) A1 ΑI Continuation-in-part of Ser. No. US 2000-710425, filed on 8 Nov 2000, RLI GRANTED, Pat. No. US 6723327 Continuation-in-part of Ser. No. US 1999-449013, filed on 24 Nov 1999, GRANTED, Pat. No. US 6350457 PRAI US 1999-137112P 19990602 (60) DT Utility APPLICATION FS SPECKMAN LAW GROUP PLLC, 1501 WESTERN AVE, SEATTLE, WA, 98101 LREP Number of Claims: 22 CLMN Exemplary Claim: 1 ECL DRWN 12 Drawing Page(s) LN.CNT 1916 CAS INDEXING IS AVAILABLE FOR THIS PATENT. AΒ Methods for the prevention and treatment of disorders, including disorders of the skin and respiratory system, such as infection with mycobacteria such as M. \*\*\*tuberculosis\*\*\* or M. avium, sarcoidosis, asthma, allergic rhinitis, allergic dermatitis and lung cancers are provided, such methods comprising administering a composition comprising at least one derivative of delipidated and deglycolipidated M. vaccae cells. L15 ANSWER 2 OF 28 USPATFULL on STN 2004:196851 USPATFULL AN ΤI Regulation of human b7-h2 protein IN Encinas, Jeffrey, Kyoto-shi, Kyoto-fu, JAPAN Tanabe, Eri, Nara-shi Nara-ken, JAPAN Watanabe, Shinichi, Nara-shi Nara-ken, JAPAN PΙ US 2004152156 A1 20040805 US 2004-250533 20040409 (10) ΑI A1 WO 2002-EP28 20020104 DT Utility FS APPLICATION JEFFREY M. GREENMAN, BAYER PHARMACEUTICALS CORPORATION, 400 MORGAN LANE, LREP WEST HAVEN, CT, 06516 CLMN Number of Claims: 51 ECL Exemplary Claim: 1 22 Drawing Page(s) DRWN LN.CNT 2605 CAS INDEXING IS AVAILABLE FOR THIS PATENT. Reagents which regulate human B7-H2 and reagents which bind to human AB B7-H2 gene products can play a role in preventing, ameliorating, or correcting dysfunctions or diseases including, but not limited to, allergic diseases, such as respiratory allergies, food allergies, asthma, and atopic dermatitis, as well as in the treatment of intracellular bacterial infections, such as \*\*\*tuberculosis\*\*\* leprosy, listeriosis, and salmonellosis; and autoimmune diseases, such as multiple sclerosis, rheumatoid arthritis, and type I diabetes, as well as in the treatment of helminth and extracellular microbial infections. L15 ANSWER 3 OF 28 USPATFULL on STN AN 2004:184102 USPATFULL

TI

\*\*\*Tuberculosis\*\*\*

vaccine

```
Lalvani, Ajit, Oxford, UNITED KINGDOM
IN
       Pathan, Ansar A., Oxford, UNITED KINGDOM
       ISIS INNOVATION LIMITED, Oxford, UNITED KINGDOM (non-U.S. corporation)
PA
PΤ
       US 2004141985
                         'A1
                               20040722
ΑI
       US 2003-721798
                          A1
                               20031126 (10)
       Division of Ser. No. US 2001-916201, filed on 27 Jul 2001, ABANDONED
RLI
       Continuation-in-part of Ser. No. US 1999-467893, filed on 21 Dec 1999,
       ABANDONED
       US 1998-113783P
                           19981223 (60)
PRAI
       Utility
DT
FS
       APPLICATION
LREP
       NIXON & VANDERHYE, PC, 1100 N GLEBE ROAD, 8TH FLOOR, ARLINGTON, VA,
       22201-4714
       Number of Claims: 27
CLMN
       Exemplary Claim: 1
ECL
DRWN
       4 Drawing Page(s)
LN.CNT 1505
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       A method of
                   ***detecting***
                                       an anti-mycobacterial
                                                               ***CD8***
AB
                                                            ***CD8***
       cell response comprising contacting a population of
                                               ***peptides*** selected from
       cells of an individual with one or more
                            represented by SEQ ID NO: 3, 4, 7, 8, 9, 10, 11
             ***peptides***
                                                    ***peptides***
       or 12, and, optionally, one or two further
       represented by SEQ ID NO: 1 and/or 2, wherein one or more of said
         ***peptides*** may be substituted by an analogue which binds a T cell
       receptor which recognises the corresponding substituted ***peptide***
                                                                ***CD8***
       , and determining whether ***CD8*** T cells of the
       cell population recognize the ***peptide*** (s).
       The invention also provides a method of vaccinating against infection by
       a mycobacterium, wherein the vaccination leads to a
                                                             ***CD8***
       response, comprising administering (i) a ***CD8***
                                                              T cell epitope of
       a mycobacterium protein, (ii) an analogue of the epitope which is
       capable of inhibiting the binding of the epitope to a T cell receptor,
       (iii) a precursor or (i) or (ii) which is capable of being processed to
       provide (i) or (ii), or (iv) a polynucleotide which is capable of being
       expressed to provide (i), (ii) or (iii).
L15 ANSWER 4 OF 28 USPATFULL on STN
       2004:144604 USPATFULL
AN
ΤI
       Protection against mycobacterial infections
IN
       Vipond, Richard, Wiltshire, UNITED KINGDOM
       Shuttleworth, Helen, Salisbury Wiltshire, UNITED KINGDOM
       Ambrose, Emma, Alberta, CANADA
      Minton, Nigel Peter, Wiltshire, UNITED KINGDOM
PΙ
                         A1
       US 2004110269
                               20040610
AΙ
       US 2004-432934
                          A1
                               20040210 (10)
       WO 2001-GB5250
                               20011128
PRAI
       GB 2000-28966
                           20001128
DТ
       Utility
FS
      . APPLICATION
LREP
       Sterne Kessler, Goldstein & Fox, Suite 600, 1100 New York Avenue NW,
      Washington, DC, 20005-3934
CLMN
      Number of Claims: 29
ECL
       Exemplary Claim: 1
DRWN
      No Drawings
```

LN.CNT 5805

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to a method of identifying mycobacterial genes which were induced or up-regulated during M. \*\*\*tuberculosis\*\*\* virulence, and to isolated \*\*\*peptide\*\*\* products of said genes. Also provided, are inhibitors of said genes, and \*\*\*antibodies\*\*\* which bind to said \*\*\*peptide\*\*\* products. Further embodiments include DNA and RNA vectors encoding said products, attenuated mycobacteria in which the activity of at least one of said genes or \*\*\*peptide\*\*\* products has been modified, vaccines against mycobacterial infections, and methods of \*\*\*detecting\*\*\* a mycobacterial infection.

L15 ANSWER 5 OF 28 USPATFULL on STN

AN 2004:113684 USPATFULL

TI Fusion proteins of mycobacterium \*\*\*tuberculosis\*\*\*

IN Skeiky, Yasir, Seattle, WA, UNITED STATES
Reed, Steven, Bellevue, WA, UNITED STATES
Alderson, Mark, Bainbridge Island, WA, UNITED STATES

PI US 2004086523 A1 20040506

AI US 2001-886349 A1 20010620 (9)

RLI Continuation-in-part of Ser. No. US 2000-597796, filed on 20 Jun 2000, PENDING

PRAI US 2001-265737P 20010201 (60)

DT Utility

FS APPLICATION

LREP TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834

CLMN Number of Claims: 88
ECL Exemplary Claim: 1
DRWN 7 Drawing Page(s)

LN.CNT 5261

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to compositions and fusion proteins containing at least two Mycobacterium sp. antigens, and nucleic acids encoding such compositions and fusion proteins. The compositions of the invention increase serological sensitivity of sera from individuals infected with \*\*\*tuberculosis\*\*\* , and methods for their use in the \*\*\*diagnosis\*\*\* , treatment, and prevention of \*\*\*tuberculosis\*\*\* infection.

L15 ANSWER 6 OF 28 USPATFULL on STN.

AN 2004:97263 USPATFULL

TI Methods and compounds for the treatment of immunologically-mediated diseases using mycobacterium vaccae

IN Watson, James D., Auckland, NEW ZEALAND
Tan, Paul L. J., Auckland, NEW ZEALAND
Prestidge, Ross, Auckland, NEW ZEALAND
Abernethy, Nevin, Auckland, NEW ZEALAND

PA Genesis Research and Development Corporation, Parnell, NEW ZEALAND (non-U.S. corporation)

PI US 6723327 B1 20040420

AI US 2000-710425 20001108 (9)

RLI Continuation-in-part of Ser. No. US 1999-449013, filed on 24 Nov 1999, now patented, Pat. No. US 6350457

PRAI WO 2000-NZ85 20000601 US 1999-137112P 19990602 (60)

DT Utility

GRANTED FS EXNAM Primary Examiner: Swartz, Rodney P Speckman, Ann W., Sleath, Janet Number of Claims: 12 CLMN ECL Exemplary Claim: 1 22 Drawing Figure(s); 12 Drawing Page(s) DRWN LN.CNT 1672 CAS INDEXING IS AVAILABLE FOR THIS PATENT. Methods for the prevention and treatment of disorders, including disorders of the skin and respiratory system, such as infection with \*\*\*tuberculosis\*\*\* mycobacteria such as M. or M. avium, sarcoidosis, asthma, allergic rhinitis, allergic dermatitis and lung cancers are provided, such methods comprising administering a composition comprising at least one derivative of delipidated and deglycolipidated M. vaccae cells. L15 ANSWER 7 OF 28 USPATFULL on STN AN 2004:85235 USPATFULL Noninvasive genetic immunization, expression products therefrom, and ΤI uses thereof Tang, De-chu C., Birmingham, AL, United States IN Marks, Donald H., Rockaway, NJ, United States Curiel, David T., Birmingham, AL, United States Shi, Zhongkai, Birmingham, AL, United States The UAB Research Foundation, Birmingham, AL, United States (U.S. PA corporation) ΡI US 6716823 20040406 В1 ΑI US 2000-533149 20000323 (9) RLI Continuation-in-part of Ser. No. US 402527 19990503 (60) US 1999-132216P PRAI US 1998-75113P 19980211 (60) US 1997-55520P 19970813 (60) DTUtility FS GRANTED Primary Examiner: Crouch, Deborah; Assistant Examiner: Woitach, Joseph EXNAM Frommer Lawrence & Haug, LLP, Frommer, William S., Kowalski, Thomas J. LREP CLMN Number of Claims: 33 ECL Exemplary Claim: 1 DRWN 23 Drawing Figure(s); 19 Drawing Page(s) LN.CNT 2355 CAS INDEXING IS AVAILABLE FOR THIS PATENT. products therefrom. The methods can include contacting skin of the

Disclosed and claimed are methods of non-invasive genetic immunization in an animal and/or methods of inducing a systemic immune or therapeutic response in an animal, products therefrom and uses for the methods and products therefrom. The methods can include contacting skin of the animal with a vector in an amount effective to induce the systemic immune or therapeutic response in the animal. The vector can include and express an exogenous nucleic acid molecule encoding an epitope or gene product of interest. The systemic immune response can be to or from the epitope or gene product. The nucleic acid molecule can encode an epitope of interest and/or an antigen of interest and/or a nucleic acid molecule that stimulates and/or modulates an immunological response and/or stimulates and/or modulates expression, e.g., transcription and/or translation, such as transcription and/or translation of an endogenous and/or exogenous nucleic acid molecule; e.g., one or more of influenza hemagglutinin, influenza nuclear protein, influenza M2, tetanus toxin C-fragment, anthrax protective antigen, anthrax lethal factor, rabies

glycoprotein, HBV surface antigen, HIV gp 120, HIV gp 160, human carcinoembryonic antigen, malaria CSP, malaria SSP, malaria MSP, malaria pfg, and mycobacterium \*\*\*tuberculosis\*\*\* HSP; and/or a therapeutic, an immunomodulatory gene, such as co-stimulatory gene and/or a gene. The immune response can be induced by the vector \*\*\*cvtokine\*\*\* expressing the nucleic acid molecule in the animal's cells. The animal's cells can be epidermal cells. The immune response can be against a pathogen or a neoplasm. A prophylactic vaccine or a therapeutic vaccine or an immunological composition can include the vector. The animal can be a vertebrate, e.g., a mammal, such as human, a cow, a horse, a dog, a cat, a goat, a sheep or a pig; or fowl such as turkey, chicken or duck. The vector can be one or more of a viral vector, including viral coat, e.g., with some or all viral genes deleted therefrom, bacterial, protozoan, transposon, retrotransposon, and DNA vector, e.g., a recombinant vector; for instance, an adenovirus, such as an adenovirus defective in its E1 and/or E3 and/or E4 region(s). The method can encompass applying a delivery device including the vector to the skin of the animal, as well as such a method further including disposing the vector in and/or on the delivery device. The vector can have all viral genes deleted therefrom. The vector can induce a therapeutic and/or an anti-tumor effect in the animal, e.g., by expressing an oncogene, a tumor-suppressor gene, or a tumor-associated gene. Immunological \*\*\*antibodies\*\*\* , cells products generated by the expression, e.g., from the methods, and the expression products, are likewise useful in in and ex vivo applications, and such immunological and expression products and cells and applications are disclosed and claimed. Methods for expressing a gene product in vivo and products therefor and therefrom including mucosal and/or intranasal administration of an adenovirus, advantageously an E1 and/or E3 and/or E4 defective or deleted adenovirus, such as a human adenovirus or canine adenovirus, are also disclosed and claimed.

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L15 ANSWER 8 OF 28 USPATFULL on STN
AN -
       2004:76186 USPATFULL
TΙ
       Therapeutic TB vaccine
       Andersen, Peter, Bronshoj, DENMARK
IN
       Rosenkrands, Ida, Vaerlose, DENMARK
       Stryhn, Anette, Virum, DENMARK
ΡI
       US 2004057963
                          A1
                               20040325
ΑI
       US 2003-617038
                          A1
                               20030711 (10)
PRAI
       DK 2002-1098
                           20020713
       US 2002-401725P.
                           20020807 (60)
DT
       Utility
FS
       APPLICATION
       HOWSON AND HOWSON, ONE SPRING HOUSE CORPORATION CENTER, BOX 457, 321
LREP
       NORRISTOWN ROAD, SPRING HOUSE, PA, 19477
CLMN
       Number of Claims: 22
ECL
       Exemplary Claim: 1
DRWN
       7 Drawing Page(s)
LN.CNT 6018
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AΒ
       Therapeutic vaccines comprising polypeptides expressed during the latent
       stage of mycobacteria infection are provided, as are multiphase
       vaccines, and methods for treating and preventing ***tuberculosis***
```

AN 2004:13414 USPATFULL

TI Vaccine and drug delivery by topical application of vectors and vector extracts

IN Tang, De-chu C., Birmingham, AL, UNITED STATES
Shi, Zhongkai, Birmingham, AL, UNITED STATES
van Kampen, Kent Rigby, Hoover, AL, UNITED STATES

PI US 2004009936 A1 20040115

AI US 2003-346021 A1 20030116 (10)

RLI Continuation-in-part of Ser. No. US 2002-116963, filed on 5 Apr 2002, PENDING Continuation-in-part of Ser. No. US 2002-52323, filed on 18 Jan 2002, PENDING Continuation-in-part of Ser. No. US 2000-563826, filed on 3 May 2000, GRANTED, Pat. No. US 6348450 Continuation-in-part of Ser. No. US 2000-533149, filed on 23 Mar 2000, PENDING Continuation-in-part of Ser. No. US 2000-402527, filed on 3 Jan 2000, PENDING

PRAI US 1999-132216P 19990503 (60)

DT Utility

FS APPLICATION

LREP FROMMER LAWRENCE & HAUG, 745 FIFTH AVENUE- 10TH FL., NEW YORK, NY, 10151

CLMN Number of Claims: 92 ECL Exemplary Claim: 1 DRWN 27 Drawing Page(s)

LN.CNT 2913

CAS INDEXING IS AVAILABLE FOR THIS PATENT. Disclosed and claimed are methods of non-invasive immunization and drug AΒ delivery in an animal and/or methods of inducing a systemic immune or therapeutic response in an animal following topical application of non-replicative vectors, products therefrom and uses for the methods and products therefrom. Also disclosed and claimed are methods of non-invasive immunization and drug delivery in an animal and/or a method of inducing a systemic immune response or systemic therapeutic response to a gene product comprising contacting skin of the animal with cell-free extracts in an amount effective to induce the response, wherein the extracts are prepared by filtration of disrupted cells, wherein the cell comprises and expresses a nucleic acid molecule. Preferably, the cell is temporarily disrupted by sonication, remaining intact and viable after the sonication. Also, methods are disclosed and claimed for enhancing the immunogenicity and efficacy of an epicutaneous vaccine for inducing a systemic immune response to an antigen, in an animal comprising contacting skin of the animal with vaccines admixed with heat-shock protein 27, in an amount effective to induce the response. The methods include contacting skin of the animal with a vector in an amount effective to induce the systemic immune or therapeutic response. The vector can include and express an exogenous nucleic acid molecule encoding an epitope or gene product of interest. The systemic immune response can be to or from the epitope or gene product. The nucleic acid molecule can encode an epitope or antigen of interest and/or a nucleic acid molecule that stimulates and/or modulates an immunological response and/or stimulates and/or modulates expression, e.g., transcription and/or translation, such as transcription and/or translation of an endogenous and/or exogenous nucleic acid molecule; e.g., one or more of influenza hemagglutinin, influenza nuclear protein, influenza M2, tetanus toxin C-fragment, anthrax protective antigen, anthrax lethal factor, anthrax germination factors, rabies glycoprotein, HBV surface antigen, HIV gp120, HIV gp160, human carcinoembryonic antigen, malaria CSP, malaria SSP, malaria MSP, malaria pfg, botulinum toxin A, and mycobacterium \*\*\*tuberculosis\*\*\* HSP; and/or a therapeutic, an immunomodulatory gene, such as co- stimulatory gene

\*\*\*cytokine\*\*\* gene. The immune response can be induced by and/or a the vector expressing the nucleic acid molecule in the animal's cells including epidermal cells. The immune response can also be induced by antigens expressed from the nucleic acid molecule within the vector. The immune response can be against a pathogen or a neoplasm. A prophylactic vaccine or a therapeutic vaccine or an immunological composition can include the vector. The animal can be a vertebrate, e.g., a mammal, such as human, a cow, a horse, a dog, a cat, a goat, a sheep or a pig; or fowl such as turkey, chicken or duck. The vector can be one or more of a viral vector, including viral coat, e.g., with some or all viral genes deleted therefrom, bacterial, protozoan, transposon, retrotransposon, and DNA vector, e.g., a recombinant vector; for instance, an adenovirus, such as an adenovirus defective in its El and/or E3 and/or E4 region(s) and/or all adenoviral genes.

AN

ΤI

IN

PA

PΙ

ΑI

DT

FS

LREP

CLMN

ECL

AB

AN

ΤI

IN PI

ΑI

DT

FS

PRAI

LREP

CLMN

DRWN

ECL

DRWN

PRAI

```
L15 ANSWER 10 OF 28 USPATFULL on STN
      2003:334717 USPATFULL
      Fusion proteins of Mycobacterium
                                       ***tuberculosis***
      Skeiky, Yasir, Bellevue, WA, UNITED STATES
      Guderian, Jeff, Lynwood, WA, UNITED STATES
      Reed, Steven, Bellevue, WA, UNITED STATES
      Corixa Corporation, Seattle, WA, UNITED STATES (U.S. corporation)
      US 2003235593
                       A1
                             20031225
      US 2003-369983
                        A1
                             20030218 (10)
      US 2002-357351P
                        20020215 (60)
      Utility
      APPLICATION
      TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH
      FLOOR, SAN FRANCISCO, CA, 94111-3834
      Number of Claims: 85
      Exemplary Claim: 1
      43 Drawing Page(s)
LN.CNT 2856
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
      The present invention relates to compositions and fusion proteins
      containing at least two Mycobacterium sp. antigens, and nucleic acids
      encoding such compositions and fusion proteins. The compositions of the
      invention increase serological sensitivity of sera from individuals
      infected with
                     ***tuberculosis*** , and methods for their use in the
        infection.
L15 ANSWER 11 OF 28 USPATFULL on STN
      2003:282669 USPATFULL
      Compositions and methods for treatment of infectious and inflammatory
      Ho, John L., New York, NY, UNITED STATES
      US 2003199012
                        A1
                             20031023
      US 2003-357043
                        A1
                             20030131 (10)
      US 2002-353985P
                        20020201 (60)
      Utility
      APPLICATION
      Michael L. Goldman, Esq., NIXON & PEABODY LLP, Clinton Square, P.O. Box
      31051, Rochester, NY, 14603-1051
      Number of Claims: 46
      Exemplary Claim: 1
      22 Drawing Page(s)
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## LN.CNT 2138 CAS INDEXING IS AVAILABLE FOR THIS PATENT. The present invention relates to a nucleic acid construct having a nucleic acid molecule that encodes a factor suppressing an immune response to Mycobacterium \*\*\*tuberculosis\*\*\* in a host subject; an \*\*\*antibody\*\*\* against the protein or polypeptide encoded isolated by the nucleic acid molecule; and uses for the protein and its \*\*\*antibody\*\*\* , including in a method for \*\*\*detection\*\*\* \*\*\*tuberculosis\*\*\* in a sample of tissue or body Mycobacterium fluids; a method of vaccinating a mammal against infection by Mycobacterium \*\*\*tuberculosis\*\*\* ; a vaccine for preventing infection and disease of mammals by Mycobacterium \*\*\*tuberculosis\*\*\* and for actively immunizing mammals against Mycobacterium \*\*\*tuberculosis\*\*\* ; and methods of treating inflammatory disease in mammals. L15 ANSWER 12 OF 28 USPATFULL on STN 2003:148763 USPATFULL AN TΙ Mycobacterium \*\*\*tuberculosis\*\*\* DNA sequences encoding immunostimulatory \*\*\*peptides\*\*\* and methods for using same Nano, Francis E., Victoria, CANADA IN University of Victoria Innovation and Development Corporation, Victoria, PA CANADA (non-U.S. corporation) PΙ US 6572865 В1 20030603 ΑI US 2000-477135 20000103 (9) Continuation-in-part of Ser. No. US 1997-990823, filed on 15 Dec 1997, RLI now patented, Pat. No. US 6228371, issued on 8 May 2001 Continuation of Ser. No. WO 1996-US10375, filed on 14 Jun 1996 PRAI US 1995-254P 19950615 (60) Utility DTGRANTED FS EXNAM Primary Examiner: Swartz, Rodney P LREP Klarquist Sparkman, LLP Number of Claims: 28 CLMN ECL Exemplary Claim: 1 DRWN 1 Drawing Figure(s); 4 Drawing Page(s) LN.CNT 4304 CAS INDEXING IS AVAILABLE FOR THIS PATENT. Nucleotide sequences isolated from Mycobacterium \*\*\*tuberculosis\*\*\* are disclosed. These sequences encode immunostimulatory \*\*\*peptides\*\*\* . Also disclosed are vaccine preparations formulated using these \*\*\*peptides\*\*\* L15 ANSWER 13 OF 28 USPATFULL on STN 2003:70984 USPATFULL ANTI Mycobacterium \*\*\*tuberculosis\*\*\* DNA sequences encoding immunostimulatory \*\*\*peptides\*\*\* and methods for using same . Nano, Francis E., Victoria, CANADA IN University of Victoria Innovation and Development Corporation (non-U.S. PA corporation) PΙ US 2003049269 Α1 20030313 ΑI US 2001-997181 A1 20011128 (9)

Division of Ser. No. US 2000-477135, filed on 3 Jan 2000, PENDING

GRANTED, Pat. No. US 6228371 Continuation-in-part of Ser. No. WO

1996-US10375, filed on 14 Jun 1996, UNKNOWN

19950615 (60)

US 1995-254P

Utility

Continuation-in-part of Ser. No. US 1997-990823, filed on 15 Dec 1997,

RLI

PRAI DT

```
APPLICATION
 FS
        KLARQUIST SPARKMAN, LLP, Suite 1600, One World Trade Center, Portland,
 LREP
        OR, 97204
       Number of Claims: 12
CLMN
 ECL
        Exemplary Claim: 1
DRWN
        4 Drawing Page(s)
LN.CNT 4351
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
        Nucleotide sequences isolated from Mycobacterium ***tuberculosis***
        are disclosed. These sequences encode immunostimulatory
                                                                  ***peptides***
        . Also disclosed are vaccine preparations formulated using these
          ***peptides***
L15 ANSWER 14 OF 28 USPATFULL on STN
        2003:70978 USPATFULL
AN
ΤI
       Mvcobacterium
                      ***tuberculosis***
                                             DNA sequences encoding
        immunostimulatory ***peptides***
                                             and methods for using same
 IN
        Nano, Francis E., Victoria, CANADA
       University of Victoria Innovation and Development Corporation (non-U.S.
 PA
        corporation)
       US 2003049263
                                20030313
PΙ
                           Α1
ΑI
       US 2001-997182
                          A1
                                20011128 (9)
RLI
       Division of Ser. No. US 2000-477135, filed on 3 Jan 2000, PENDING
        Continuation-in-part of Ser. No. US 1997-990823, filed on 15 Dec 1997,
        PATENTED Continuation-in-part of Ser. No. WO 1996-US10375, filed on 14
        Jun 1996, UNKNOWN
       US 1995-254P
                            19950615 (60)
 PRAI
 DT
       Utility
 FS
       APPLICATION
        Klarquist Sparkman, LLP, One World Trade Center, Suite 1600, 121 SW
LREP
        Salmon Street, Portland, OR, 97204
CLMN
       Number of Claims: 12
        Exemplary Claim: 1
ECL
DRWN
        4 Drawing Page(s)
LN.CNT 4317
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.
                                                          ***tuberculosis***
AΒ
        Nucleotide sequences isolated from Mycobacterium
        are disclosed. These sequences encode immunostimulatory ***peptides***
        . Also disclosed are vaccine preparations formulated using these
          ***peptides***
L15 ANSWER 15 OF 28 USPATFULL on STN
AN
        2003:40415 USPATFULL
TI
       Methods for inducing interleukin-12 and a type1/Th1 T-cell response
 IN
       Modlin, Robert L., Sherman Oaks, CA, United States
        Libraty, Daniel H., Bangkok, THAILAND
 PΑ
        The Regents of the University of California, Oakland, CA, United States
        (U.S. corporation)
 PΙ
       US 6517839
                                20030211
                           В1
ΑI
       US 1998-118426
                                19980717 (9)
 PRAI
       US 1997-52970P
                            19970718 (60)
 DT
       Utility
 FS
        GRANTED
       Primary Examiner: Nolan, Patrick J.; Assistant Examiner: Ewoldt, Gerald
 EXNAM
LREP
       Mandel & Adriano
       Number of Claims: 2
 CLMN
```

ECL Exemplary Claim: 1 DRWN 11 Drawing Figure(s); 10 Drawing Page(s) LN.CNT 1318 CAS INDEXING IS AVAILABLE FOR THIS PATENT. Methods for inducing interleukin-12 production and inducing a type 1/Th1 T cell response in a subject, thereby stimulating cell-mediated immunity for prevention or treatment of pathogen infections or treatment of a \*\*\*interferon\*\*\* (-sensitive tumor, are provided. Compounds effective in the above-described methods include a lipopeptide having an N-terminal ester- or amide-linked fatty acyl group and are administered in an amount effective to induce interleukin-12 and to induce the type 1/Th1 T-cell response. Preferably, the subject is a human patient; and the lipopeptide is an N-terminal moiety of a 19 kDa or a 38 kDa lipoprotein of Mycobacterium \*\*\*tuberculosis\*\*\* L15 ANSWER 16 OF 28 USPATFULL on STN 2002:343542 USPATFULL AN Methods and compounds for the treatment of immunologically - mediated ΤI diseases of the respiratory system using mycobacterium vaccae IN Watson, James D., Auckland, NEW ZEALAND Tan, Paul L.J., Auckland, NEW ZEALAND US 2002197265 PΙ A120021226 US 2002-51643 A1 20020118 (10) ΑI Continuation of Ser. No. US 1998-156181, filed on 17 Sep 1998, PENDING RLI Continuation-in-part of Ser. No. US 1997-996624, filed on 23 Dec 1997, ABANDONED DTUtility FS APPLICATION LREP Janet Sleath, SPECKMAN LAW GROUP, Suite 100, 1501 Western Avenue, Seattle, WA, 98101 Number of Claims: 8 CLMN ECL Exemplary Claim: 1 DRWN 10 Drawing Page(s) LN.CNT 6136 CAS INDEXING IS AVAILABLE FOR THIS PATENT. Methods for the prevention and treatment by immunotherapy of lung immune AB disorders, including infection with mycobacteria such as M. \*\*\*tuberculosis\*\*\* or M. avium, sarcoidosis, asthma, allergic rhinitis and lung cancers are provided, such methods comprising administering a composition having antigenic and/or adjuvant properties. Compositions which may be usefully employed in the inventive methods include inactivated M. vaccae cells, delipidated and deglycolipidated M. vaccae cells, M. vaccae culture filtrate and compounds present in or derived therefrom, together with combinations of such components. L15 ANSWER 17 OF 28 USPATFULL on STN AN 2002:336874 USPATFULL TI MHC class I associated \*\*\*peptides\*\*\* for prevention and treatment \*\*\*tuberculosis\*\*\* Flyer, David, Olney, MD, UNITED STATES IN Ross, Mark M., Charlottesville, VA, UNITED STATES Hunt, Donald F., Charlottesville, VA, UNITED STATES White, Forest M., Charlottesville, VA, UNITED STATES

Engelhard, Victor H., Charlottesville, VA, UNITED STATES

20021219

Philip, Ramila, Charlottesville, VA, UNITED STATES

A1

PΙ

US 2002192229

```
ΑI
      US 2001-22286
                         A1
                               20011213 (10)
PRAI
      US 2001-264978P
                           20010130 (60)
      US 2000-255292P
                           20001213 (60)
DT
      Utility
FS
      APPLICATION
LREP
       CARELLA, BYRNE, BAIN, GILFILLAN, CECCHI,, STEWART & OLSTEIN, 6 Becker
       Farm Road, Roseland, NJ, 07068
      Number of Claims: 32
CLMN
ECL
       Exemplary Claim: 1
DRWN
      No Drawings
LN.CNT 1657
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention relates to compositions and methods for the
       prevention, treatment, and ***diagnosis*** of ***tuberculosis***
       , and discloses ***peptides*** , polypeptides, and polynucleotides
       that can be used to stimulate a CTL response against
         ***tuberculosis*** . The
                                     ***peptide***
                                                    and/or proteins of the
       invention may be used as a therapeutic drug to stimulate the immune
       system to recognize and eliminate M. ***tuberculosis***
       cells or as a vaccine for the prevention of disease.
                                                              ***Antibodies***
       that react with the immunogens of the invention, as well as methods of
       using these
                   ***antibodies***
                                       for prevention and treatment of
       disease, are also disclosed.
L15 ANSWER 18 OF 28 USPATFULL on STN
       2002:307565 USPATFULL
AN
      Mycobacterium ***tuberculosis***
                                            DNA sequences encoding
ΤI
       immunostimulatory ***peptides***
                                            and methods for using same
       Nano, Francis E., Victoria, CANADA
IN
       University of Victoria Innovation and Development Corporation (non-U.S.
PA
       corporation)
                               20021121
PΙ
       US 2002172684
                          Α1
AΙ
      US 2001-996634
                         A1
                               20011128 (9)
       Division of Ser. No. US 2000-477135, filed on 3 Jan 2000, PENDING
RLI
       Continuation-in-part of Ser. No. US 1997-990823, filed on 15 Dec 1997,
       PATENTED Continuation-in-part of Ser. No. WO 1996-US10375, filed on 14
       Jun 1996, UNKNOWN
      US 1995-254P
                           19950615 (60)
PRAI
DТ
      Utility
FS
      APPLICATION
       KLARQUIST SPARKMAN, LLP, One World Trade Center, Suite 1600, 121 S.W.
LREP
       Salmon Street, Portland, OR, 97204
      Number of Claims: 12
CLMN
ECL
       Exemplary Claim: 1
DRWN
       4 Drawing Page(s)
LN.CNT 4329
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       Nucleotide sequences isolated from Mycobacterium
                                                         ***tuberculosis***
       are disclosed. These sequences encode immunostimulatory
                                                                ***peptides***
       . Also disclosed are vaccine preparations formulated using these
         ***peptides***
L15 ANSWER 19 OF 28 USPATFULL on STN
AN
       2002:202126 USPATFULL
       Composition comprising a carrier and a purified mycobacterial lipid
ΤI
       cell-wall component and its use in the prevention, treatment and
```

\*\*\*diagnosis\*\*\* of disease

```
IN
       Verschoor, Jan Adrianus, Pretoria, SOUTH AFRICA
       Lenaerts, Anne, Genk, BELGIUM
       Johannsen, Elzbieta, Pretoria, SOUTH AFRICA
       Adcock Ingram Limited, Bryanston, SOUTH AFRICA (non-U.S. corporation)
PA
       US 6433013
                          В1
                               20020813
PΙ
       US 1999-388725
                               19990902 (9)
ΑI
       Continuation-in-part of Ser. No. WO 1998-GB681, filed on 13 Mar 1998
RLI
PRAI
       ZA 1997-1817
                           19970303
       ZA 1997-10300
                           19971114
\mathbf{DT}
       Utility
FS
       GRANTED
EXNAM Primary Examiner: Weddington, Kevin E.
LREP
      Ladas & Parry
CLMN
      Number of Claims: 10
ECL
       Exemplary Claim: 1
DRWN
       41 Drawing Figure(s); 41 Drawing Page(s)
LN.CNT 4997
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       A composition comprising a purified lipid cell-wall component or analog
AB
       or derivative thereof and a suitable pharmaceutical carrier, medium,
       excipient or adjuvant is described. The composition is useful in
       prophylactic and therapeutic methods of treating a microbial infection
       in a subject, typically a mycobacterial infection such as
         ***tuberculosis*** , and immune disorders, inflammatory conditions and
       allergies in a subject, typically autoimmune diseases. It is also useful
       in ***diagnostic*** methods. The purified lipid cell-wall component
       is typically a purified mycolic acid or a mixture of purified mycolic
       acids from a bacterium which produces mycolic acids. The bacterium is
       from Mycobacterium, Corynebacterium, Nocardia or Rhodococcus.
L15 ANSWER 20 OF 28 USPATFULL on STN
       2002:185292 USPATFULL
AN .
       Compounds and methods for ***diagnosis***
TI
                                                    and immunotherapy of
         ***tuberculosis***
       Campos-Neto, Antonio, Bainbridge Island, WA, UNITED STATES
IN
       Skeiky, Yasir, Seattle, WA, UNITED STATES
       Ovendale, Pamela, Everett, WA, UNITED STATES
       Jen, Shyian, Seattle, WA, UNITED STATES
       Lodes, Michael, Seattle, WA, UNITED STATES
                               20020725
PΙ
      US 2002098200
                         A1
ΑI
      US 2001-793306
                          A1
                               20010226 (9)
PRAI
      US 2000-223828P
                          20000808 (60)
      US 2000-185037P
                           20000225 (60)
DΤ
      Utility
FS
      APPLICATION
LREP
      TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH
       FLOOR, SAN FRANCISCO, CA, 94111-3834
CLMN
      Number of Claims: 51
ECL
       Exemplary Claim: 1
DRWN
       18 Drawing Page(s)
LN.CNT 6182
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
      Compounds and methods for ***diagnosing***
                                                       ***tuberculosis***
       for inducing protective immunity against
                                                  ***tuberculosis***
      disclosed. The compounds provided include polypeptides that contain at
       least one immunogenic portion of one or more Mycobacterium proteins and
       DNA molecules encoding such polypeptides. ***Diagnostic*** kits
```

containing such polypeptides or DNA sequences and a suitable

\*\*\*detection\*\*\* reagent may be used for the \*\*\*detection\*\*\* of

Mycobacterium infection in patients and biological samples.

\*\*\*Antibodies\*\*\* directed against such polypeptides are also

provided.

In addition, such compounds may be formulated into vaccines and/or

pharmaceutical compositions for immunization against Mycobacterium

infection.

L15 ANSWER 21 OF 28 USPATFULL on STN

AN 2002:157689 USPATFULL

TI Composition comprising a carrier and a purified mycobacterial lipid cell-wall component and its use in the prevention, treatment and \*\*\*diagnosis\*\*\* of disease

IN Verschoor, Jan Adrianus, The Willows, SOUTH AFRICA Lenaerts, Anne, Genk, BELGIUM Johannsen, Elzbieta, Lynwood Glen, SOUTH AFRICA

PA ADCOCK INGRAM LIMITED (non-U.S. corporation)

PI US 2002082297 A1 20020627

AI US 2001-847365 A1 20010502 (9)

RLI Division of Ser. No. US 1999-388725, filed on 2 Sep 1999, UNKNOWN

PRAI ZA 1997-1817 19970303 ZA 1997-10300 19971114

DT Utility

FS APPLICATION

LREP Ladas & Parry, 26 West 61st Street, New York, NY, 10023

CLMN Number of Claims: 58
ECL Exemplary Claim: 1
DRWN 38 Drawing Page(s)

LN.CNT 5454

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A composition including a purified lipid cell-wall component or analog or derivative thereof and a suitable pharmaceutical carrier, medium, excipient or adjuvant is described. The composition is useful in prophylactic and therapeutic methods of treating a microbial infection in a subject, typically a mycobacterial infection such as

\*\*\*tuberculosis\*\*\* , and immune disorders, inflammatory conditions and allergies in a subject, typically autoimmune diseases. It is also useful in \*\*\*diagnostic\*\*\* methods. The purified lipid cell-wall component is typically a purified mycolic acid or a mixture of purified mycolic acids form a bacterium which produces mycolic acids. The bacterium if from Mycobacterium, Corynbacterium, Nocardia or Rhodococcus.

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L15 ANSWER 22 OF 28 USPATFULL on STN
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AN 2002:157688 USPATFULL

TI A METHOD FOR TREATING AN IMMUNE DISORDER WITH A PURIFIED MYCOBACTERIAL MYCOLIC ACID

IN Verschoor, Jan Adrianus, Pretoria, SOUTH AFRICA Lenaerts, Anne, Genk, BELGIUM Johannsen, Elzbieta, Pretoria, SOUTH AFRICA

PA ADCOCK INGRAM LIMITED (non-U.S. corporation)

PI US 2002082296 A1 20020627

AI US 2001-847364 A1 20010502 (9)

RLI Division of Ser. No. US 1999-388725, filed on 2 Sep 1999, UNKNOWN

PRAI ZA 1997-1817 19970303 ZA 1997-10300 19971114

DT Utility

FS APPLICATION Ladas & Parry, 26 West 61st Street, New York, NY, 10023 LREP Number of Claims: 58 CLMN Exemplary Claim: 1 ECL DRWN 38 Drawing Page(s) LN.CNT 5456 CAS INDEXING IS AVAILABLE FOR THIS PATENT. AB A composition including a purified lipid cell-wall component or analog or derivative thereof and a suitable pharmaceutical carrier, medium, excipient or adjuvant is described. The composition is useful in prophylactic and therapeutic methods of treating a microbial infection in a subject, typically a mycobacterial infection such as \*\*\*tuberculosis\*\*\* , and immune disorders, inflammatory conditions and allergies in a subject, typically autoimmune disease. It also useful in \*\*\*diagnostic\*\*\* methods. The purified lipid cell-wall component is typically a purified mycolic acid or a mixture of purified mycolic acids from a bacterium which produces mycolic acids. The bacterium is from Mycobacterium, Corynebacterium, Nocardia or Rhodococcus. L15 ANSWER 23 OF 28 USPATFULL on STN ΑN 2002:99511 USPATFULL ΤI Composition comprising a carrier and a purified mycobacterial lipid cell-wall component and its use in the prevention, treatment and \*\*\*diagnosis\*\*\* of disease Verschoor, Jan Adrianus, Pretoria, SOUTH AFRICA IN Lenaerts, Anne, Genk, BELGIUM Johannsen, Elzbieta, Pretoria, SOUTH AFRICA ADCOCK INGRAM LIMITED (non-U.S. corporation) PA PΙ US 2002052412 A1 20020502 ΑI US 2001-847514 A1 20010502 (9) Division of Ser. No. US 1999-388725, filed on 2 Sep 1999, PENDING RLI Continuation-in-part of Ser. No. WO 1998-GB681, filed on 3 Mar 1998, UNKNOWN PRAI ZA 1997-1817 19970303 ZA 1997-10300 19971114 DT Utility FS APPLICATION Clifford J. Mass, c/o Ladas & Parry, 26 West 61st Street, New York, NY, LREP .10023 CLMN Number of Claims: 58 ECL Exemplary Claim: 1 DRWN 38 Drawing Page(s) LN.CNT 5085 CAS INDEXING IS AVAILABLE FOR THIS PATENT. A composition including a purified lipid cell-wall component or analog AΒ or derivative thereof and a suitable pharmaceutical carrier, medium, excipient or adjuvant is described. The composition is useful in prophylactic and therapeutic methods of treating a microbial infection in a subject, typically a mycobacterial infection such as \*\*\*tuberculosis\*\*\* , and immune disorders, inflammatory conditions and allergies in a subject, typically autoimmune disease. It is also useful

\*\*\*diagnostic\*\*\* methods. The purified lipid cell-wall component

is typically a purified mycolic acid or a mixture of purified mycolic acids from a bacterium which produces mycolic acids. The bacterium is

from Mycobacterium, Corynebacterium, Nocardia or Rhodococcus.

2002:84912 USPATFULL ΑN Isolated and purified nonpeptide antigens from mycobacterium TI \*\*\*tuberculosis\*\*\* Liu, Gui, Medford, MA, UNITED STATES IN Beltz, Gerald, Lexington, MA, UNITED STATES LeClair, Kenneth, Needham, MA, UNITED STATES Cox, Daniel, Medway, MA, UNITED STATES Kensil, Charlotte, Milford, MA, UNITED STATES 20020418 PΙ US 2002044951 A1 US 2001-825789 20010404 (9) ΑI A1 PRAI US 2000-194519P 20000404 (60) DTUtility FS APPLICATION PENNIE AND EDMONDS, 1155 AVENUE OF THE AMERICAS, NEW YORK, NY, 100362711 LREP Number of Claims: 38 CLMN Exemplary Claim: 1 ECL DRWN 15 Drawing Page(s) LN.CNT 1185 CAS INDEXING IS AVAILABLE FOR THIS PATENT. Nonpeptide antigens were isolated and purified from Mycobacterium AΒ \*\*\*tuberculosis\*\*\* . The antigens were used in vaccine compositions, pharmaceutical compositions and methods to elicit an immune response to. \*\*\*tuberculosis\*\*\* in a mammal. Mycobacterium L15 ANSWER 25 OF 28 USPATFULL on STN 2002:54999 USPATFULL ANPOLYNUCLEOTIDE \*\*\*TUBERCULOSIS\*\*\* TIVACCINE CONTENT, JEAN, RHODE-SAINT-GENESE, BELGIUM IN HUYGEN, KRIS, BRUSSELS, BELGIUM LIU, MARGARET A., ROSEMONT, PA, UNITED STATES MONTGOMERY, DONNA, CHALFONT, PA, UNITED STATES ULMER, JEFFREY, CHALFONT, PA, UNITED STATES 20020314 PΙ US 2002032162 A1US 6384018 В2 20020507 A1 ΑI US 1998-10733 19980122 (9) Division of Ser. No. US 1994-338992, filed on 14 Nov 1994, GRANTED, Pat. RLI No. US 5736524 DTUtility FS APPLICATION JOHN W WALLEN III, MERCK & CO INC, PATENT DEPT, P O BOX 2000, RAHWAY, LREP NJ, 070650907 CLMN Number of Claims: 22 Exemplary Claim: 1 ECL 20 Drawing Page(s) LN.CNT 1205 CAS INDEXING IS AVAILABLE FOR THIS PATENT. Genes encoding Mycobacterium \*\*\*tuberculosis\*\*\* (M.tb) proteins were cloned into eukaryotic expression vectors to express the encoded proteins in mammalian muscle cells in vivo. Animals were immunized by injection of these DNA constructs, termed polynucleotide vaccines or PNV, into their muscles. Immune antisera was produced against M.tb antigens. Specific T-cell responses were \*\*\*detected\*\*\* in spleen cells of vaccinated mice and the profile of \*\*\*cytokine\*\*\* secretion in response to antigen 85 was indicative of a T.sub.hl type of helper T-cell response (i.e., high IL-2 and IFN-.gamma.). Protective efficacy of an M.tb DNA vaccine was demonstrated in mice after challenge with

M.bovis BCG, as measured by a reduction in mycobacterial multiplication

in the spleens and lungs of M.tb DNA-vaccinated mice compared to control DNA-vaccinated mice or primary infection in naive mice.

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L15 ANSWER 26 OF 28 USPATFULL on STN
AN
       2001:67182 USPATFULL
ΤI
       Mycobacterium
                       ***tuberculosis***
                                            DNA sequences encoding
       immunostimulatory
                           ***peptides***
       Nano, Francis E., Victoria, Canada
IN
PA
       University of Victoria Innovation and Development Corp., Victoria,
       Canada (non-U.S. corporation)
                               20010508
ΡI
       US 6228371
                          В1
ΑI
       US 1997-990823
                               19971215 (8)
       Continuation-in-part of Ser. No. WO 1996-US10375, filed on 14 Jun 1996
RLI
                           19950615 (60)
PRAI
       US 1995-254P
DT
       Utility
FS
       Granted
EXNAM Primary Examiner: Schwartzman, Robert A.
       Klarquist Sparkman Campbell Leigh & Whinston LLP
LREP
       Number of Claims: 23
CLMN
       Exemplary Claim: 15
ECL
       4 Drawing Figure(s); 4 Drawing Page(s)
DRWN
LN.CNT 1680
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       Nucleotide sequences isolated from Mycobacterium
                                                         ***tuberculosis***
AΒ
       are disclosed. These sequences are shown to encode immunostimulatory
         ***peptides*** . The invention encompasses, among other things,
vaccine
                                           ***peptides***
       preparations formulated using these
L15 ANSWER 27 OF 28 USPATFULL on STN
ΑN
       2001:25674 USPATFULL
TI
       TH2-specific gene
       Levinson, Doug, Sherborn, MA, United States
IN
       Gu, Wei, Brookline, MA, United States
       Lehar, Sophie, Boston, MA, United States
       Millennium Pharmaceuticals, Inc., Cambridge, MA, United States (U.S.
PA
       corporation)
       US 6190909
                          В1
                               20010220
PΙ
       US 1997-884077
                               19970625 (8)
ΑI
       Continuation-in-part of Ser. No. US 1997-841901, filed on 17 Apr 1997
RLI
DT
       Utility
FS
       Granted
EXNAM Primary Examiner: LeGuyader, John L.; Assistant Examiner: Shibuya, Mark
LREP
       Pennie & Edmonds LLP
CLMN
       Number of Claims: 17
       Exemplary Claim: 1
ECL
       3 Drawing Figure(s); 6 Drawing Page(s)
DRWN
LN.CNT 3656
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention relates to the discovery, identification and
       characterization of nucleic acids that encode a novel protein
       differentially expressed within the TH2 cell subpopulation (hereinafter
       referred to as STIF). The invention encompasses STIF nucleotides, host
       cell expression systems, STIF proteins, fusion proteins, polypeptides
       and
             ***peptides*** , ***antibodies*** to the STIF protein,
       transgenic animals that express a STIF transgene, or recombinant
```

knock-out animals that do not express the STIF protein, and compounds that modulate STIF gene expression or STIF activity that can be used for \*\*\*diagnosis\*\*\* , drug screening, clinical trial monitoring, and/or used to treat STIF based disorders, such as proliferative disorders and T-lymphocyte-related disorders including, but not limited to, chronic inflammatory diseases and disorders, such as Crohn's disease, reactive arthritis, including Lyme disease, insulin-dependent diabetes, organ-specific autoimmunity, including multiple sclerosis, Hashimoto's thyroiditis and Grave's disease, contact dermatitis, psoriasis, graft rejection, graft versus host disease, sarcoidosis, atopic conditions, such as asthma and allergy, including allergic rhinitis, gastrointestinal allergies, including food allergies, eosinophilia, conjunctivitis, glomerular nephritis, certain pathogen susceptibilities such as helminthic (e.g., leishmaniasis) and certain viral infections, including HIV, and bacterial infections, including \*\*\*tuberculosis\*\*\* and lepromatous leprosy.

```
L15 ANSWER 28 OF 28 USPATFULL on STN
       1998:36732 USPATFULL
AN
ΤI
                       ***tuberculosis***
       Polynucleotide
       Content, Jean, Rhode-Saint-Genese, Belgium
IN
       Huygen, Kris, Brussels, Belgium
       Liu, Margaret A., Rosemont, PA, United States
      Montgomery, Donna, Chalfont, PA, United States
       Ulmer, Jeffrey, Chalfont, PA, United States
      Merck & Co.,. Inc., Rahway, NJ, United States (U.S. corporation)
PA
       N. V. Innogenetics S.A., Ghent, Belgium (non-U.S. corporation)
                               19980407
PΙ
       US 5736524
       US 1994-338992
ΑI
                               19941114 (8)
DΨ
       Utility
FS
       Granted
EXNAM Primary Examiner: Chambers, Jasemine C.; Assistant Examiner: Hauda,
       Yablonsky, Michael D., Tribble, Jack L.
LREP
       Number of Claims: 17
CLMN
       Exemplary Claim: 1,11
ECL
       22 Drawing Figure(s); 15 Drawing Page(s)
DRWN
LN.CNT 1346
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       Genes encoding Mycobacterium ***tuberculosis***
                                                           (M.tb) proteins were
AB
       cloned into eukaryotic expression vectors to express the encoded
       proteins in mammalian muscle cells in vivo. Animals were immunized by
       injection of these DNA constructs, termed polynucleotide vaccines or
       PNV, into their muscles. Immune antisera was produced against M.tb
       antigens. Specific T-cell responses were ***detected***
       cells of vaccinated mice and the profile of ***cytokine***
       in response to antigen 85 was indicative of a T.sub.h 1 type of helper
       T-cell response (i.e., high IL-2 and IFN-.gamma.). Protective efficacy
```

of an M.tb DNA vaccine was demonstrated in mice after challenge with M. bovis BCG, as measured by a reduction in mycobacterial multiplication in the spleens and lungs of M.tb DNA-vaccinated mice compared to control

DNA-vaccinated mice or primary infection in naive mice.

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=> file caba caplus embase japio lifesci medline scisearch uspatfull
=> S MYCOBACT? AND cd8?
         6127 MYCOBACT? AND CD8?
=> s l1 and ((t-cell?)or(thymocyte?)or(t cell?))
   2 FILES SEARCHED...
   3 FILES SEARCHED...
   6 FILES SEARCHED...
         5472 L1 AND ((T-CELL?) OR(THYMOCYTE?) OR(T CELL?))
=> dup rem 13
          3593 DUP REM L3 (1879 DUPLICATES REMOVED)
=> s 14 and (cytokin? or prolifer?)
         2937 L4 AND (CYTOKIN? OR PROLIFER?)
=> s 15 and esat-6
           50 L5 AND ESAT-6
=> d bib ab 1-
YOU HAVE REQUESTED DATA FROM 50 ANSWERS - CONTINUE? Y/(N):y
    ANSWER 1 OF 50 CAPLUS COPYRIGHT 2005 ACS on STN
    2004:534402 CAPLUS
AN
DN
    141:70218
ΤI
    Diagnostic method and assay kit
ÍΝ
    Barry, Simon
PA
    Royal Free Hampstead NHS Trust, UK
    PCT Int. Appl., 32 pp.
    CODEN: PIXXD2
DT
    Patent
LA `
    English
FAN.CNT 1
                                                               DATE
                       KIND
                                          APPLICATION NO.
    PATENT NO.
                              DATE
                                          _____
                        ----
PI
    WO 2004055516
                        A1
                               20040701
                                       WO 2003-GB305084
                                                               20031124
        W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
            CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
            GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
            LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ; NI, NO,
            NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ,
            TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
        RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
            BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,
            ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,
            TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
PRAI GB 2002-29444
                              20021218
                         Α
    The invention provides a method of diagnosis of infection by a pathogenic
     organism wherein lymphocytes in or from isolated bronchoalveolar lavage
     fluid are exposed to an antigen specific to said pathogen and the
     resulting ***cytokine*** prodn. by said lymphocytes is indicative of a
     pos. diagnosis. Also provided is a diagnostic assay kit adapted or
     assemblable to perform the method.
RE.CNT 8
             THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
             ALL CITATIONS AVAILABLE IN THE RE FORMAT
L6
    ANSWER 2 OF 50 CAPLUS COPYRIGHT 2005 ACS on STN
AN
    2004:354972 CAPLUS
DN
    140:373880
ΤI
    Antigen-scFv fusion proteins for targeting antigen-presenting cells
    against infection, autoimmune disease and cancer
```

```
IN Britton, Warwick; Demangel, Caroline
```

PA Centenary Institute Cancer Medicine & Cell Biology, Australia

SO 'PCT Int. Appl., 82 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

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PATENT NO.
                        KIND
                                DATE
                                           APPLICATION NO.
                                                                  DATE
                         ____
                                _____
                                           _____
                                           WO 2003-AU1392
PΙ
    WO 2004035619
                         A1
                                20040429
                                                                  20031020
        W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
            CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,
            GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK,
            LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ,
            OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
            TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
            KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
             FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
            BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     US 2004146948
                               20040729
                                           US 2003-689921
                         A1
                                                                  20031017
PRAI US 2002-420232P
                         Р
                               20021018
```

AB Provided are single-chain Fv (scFv) fragment-based compns. and methods for targeting antigens to antigen-presenting cells (APCs) such as, for example, dendritic cells (DC). The scFvs are derived from monoclonal antibody NLDC-145 and N418 which are directed to DEC-205 and CD11c antigens (mouse dendritic cell receptors). Compns. and methods disclosed herein are useful for the treatment of disorders including infectious, autoimmune and neoplastic diseases.

RE.CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L6 ANSWER 3 OF 50 CAPLUS COPYRIGHT 2005 ACS on STN
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- AN 2004:44096 CAPLUS
- DN 140:215920
- TI Different \*\*\*cytokine\*\*\* production and effector/memory dynamics of .alpha..beta.+ or .gamma..vdelta.+ \*\*\*T\*\*\* \*\*\*cell\*\*\* subsets in the peripheral blood of patients with active pulmonary tuberculosis
- AU Gioia, C.; Agrati, C.; Goletti, D.; Vincenti, D.; Carrara, S.; Amicosante, M.; Casarini, M.; Giosue, S.; Puglisi, G.; Rossi, A.; Colizzi, V.; Pucillo, L. P.; Poccia, F.
- CS Laboratory of Clinical Pathology, National Institute for Infectious Diseases (I.N.M.I.) "Lazzaro Spallanzani" I.R.C.C.S., Rome, Italy
- SO International Journal of Immunopathology and Pharmacology (2003), 16(3), 247-252

CODEN: IJIPE4; ISSN: 0394-6320

- PB Biolife s.a.s.
- DT Journal
- LA English
- AB Immunity to M. tuberculosis (MTB) infection consists of interactions between various \*\*\*T\*\*\* \*\*\*cell\*\*\* subsets that control the infection and prevent further reactivation. We analyzed the effector/memory \*\*\*T\*\*\* \*\*\*cell\*\*\* dynamics and \*\*\*cytokines\*\*\* prodn. in the peripheral blood of patients with pulmonary tuberculosis (TB). We obsd. that the frequency of CD4+ \*\*\*T\*\*\* \*\*\*cell\*\*\* effectors was significantly increased during active TB, confirming a major role of this \*\*\*T\*\*\* \*\*\*cell\*\*\* subset in TB immunity.

Pre-terminally differentiated \*\*\*CD8\*\*\* + T-lymphocytes were increased in the peripheral blood as well. In contrast, we obsd. a reduced no. of effector \*\*\*mycobacteria\*\*\* -reactive .gamma..vdelta.+ T-lymphocytes with a specific defects in reacting to \*\*\*mycobacterial\*\*\* antigens, suggesting that this innate response is rapidly lost during TB infection. Nevertheless, the frequency of .gamma..vdelta.+ \*\*\*T\*\*\* \*\*\*cells\*\*\* effectors in TB patients was higher than the .alpha..beta.+ \*\*\*T\*\*\* - \*\*\*cell\*\*\* response to peptide from MTB- \*\*\*ESAT\*\*\* protein and quant. similar to PPD reactivity. Thus, \*\*\*6\*\*\* .alpha..beta.+ and .gamma..vdelta.+ \*\*\*T\*\*\* - \*\*\*cell\*\*\* differentiation and function are differently triggered by active TB infection. THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD RE.CNT 18 ALL CITATIONS AVAILABLE IN THE RE FORMAT ANSWER 4 OF 50 CAPLUS COPYRIGHT 2005 ACS on STN 2002:716868 CAPLUS 137:246533 tuberculosis epitopes in vaccines and detection of \*\*\*Mycobacterium\*\*\* Lalvani, Ajit; Pathan, Ansar A.; Hill, Adrian V. S. U.S. Pat. Appl. Publ., 19 pp., Cont.-in-part of U.S. Ser. No. 467,893, abandoned. CODEN: USXXCO Patent English FAN.CNT 1 APPLICATION NO. DATE PATENT NO. KIND --------------US 2002131976 A1 20020919 US 2001-916201 20010727 20040722 US 2003-721798 US 2004141985 A1 PRAI US 1998-113783P P 19981223 US 1999-467893 B2 19991221 В3 US 2001-916201 20010727 \*\*\*CD8\*\*\* A method of detecting an anti- \*\*\*mycobacterial\*\*\* \*\*\*cell\*\*\* response comprising contacting a population of \*\*\*T\*\*\* \*\*\*CD8\*\*\* \*\*\*T\*\*\* \*\*\*cells\*\*\* of an individual with one or more peptides selected from the peptides represented by SEQ ID NO: 3, 4, 7, 8, 9, 10, 11 or 12, and, optionally, one or two further peptides represented by SEQ ID NO: 1 and/or 2, wherein one or more of said peptides may be substituted by an analog which binds a \*\*\*T\*\*\* \*\*\*cell\*\*\* receptor which recognizes the corresponding substituted peptide, and detg. whether \*\*\*T\*\*\* \*\*\*CD8\*\*\* \*\*\*cells\*\*\* \*\*\*CD8\*\*\* of the \*\*\*cell\*\*\* population recognize the peptide(s). The invention also provides a method of vaccinating against infection by a \*\*\*mycobacterium\*\*\* , wherein the vaccination leads to a \*\*\*cell\*\*\* response, comprising administering (i) a \*\*\*CD8\*\*\* \*\*\*T\*\*\* \*\*\*cell\*\*\* epitope of a \*\*\*mycobacterium\*\*\* protein, (ii) an analog of the epitope which is capable of inhibiting the binding of the epitope to a \*\*\*T\*\*\* \*\*\*cell\*\*\* receptor, (iii) a precursor or (i) or (ii) which is capable of being processed to provide (i) or (ii), or (iv) a polynucleotide which is capable of being expressed to provide (i), (ii) or (iii). The method of detecting \*\*\*CD8\*\*\* \*\*\*cells\*\*\* is an ELISPOT assay which detects interferon-.gamma., released by the \*\*\*T\*\*\* \*\*\*cells\*\*\* following peptide recognition, using an immobilized anti-IFN-.gamma. antibody.

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- L6 ANSWER 5 OF 50 CAPLUS COPYRIGHT 2005 ACS on STN
- AN 2001:89359 CAPLUS
- DN 135:209533
- TI Vaccinia expression of \*\*\*Mycobacterium\*\*\* tuberculosis-secreted proteins: tissue plasminogen activator signal sequence enhances expression and immunogenicity of M. tuberculosis Ag85
- AU Malin, Adam S.; Huygen, Kris; Content, Jean; Mackett, Michael; Brandt, Lisa; Andersen, Peter; Smith, Steven M.; Dockrell, Hazel M.
- CS Immunology Unit, London School of Hygiene & Tropical Medicine, London, WC1E 7HT, UK
- SO Microbes and Infection (2000), 2(14), 1677-1685 CODEN: MCINFS; ISSN: 1286-4579
- PB Editions Scientifiques et Medicales Elsevier
- DT Journal
- LA English
- There is increasing evidence to implicate a role for AΒ \*\*\*cells\*\*\* in protective immunity against tuberculosis. Recombinant vaccinia (rVV) expressing \*\*\*Mycobacterium\*\*\* tuberculosis (MTB) proteins can be used both as tools to dissect \*\*\*CD8\*\*\* \*\*\*T\*\*\* - \*\*\*cell\*\*\* responses and, in attenuated form, as candidate vaccines capable of inducing a balanced CD4+/ \*\*\*CD8\*\*\* + \*\*\*T\*\*\* response. A panel of rVV was constructed to express four immunodominant secreted proteins of MTB: 85A, 85B and 85C and - \*\*\*6\*\*\* . A parallel group of rVV was constructed to include the heterologous eukaryotic tissue plasminogen activator (tPA) signal sequence to assess if this would enhance expression and immunogenicity. Clear expression was obtained for 85A, 85B and \*\*\*ESAT\*\*\* - \*\*\*6\*\*\* the addn. of tPA resulted in N-glycosylation and a 4-10-fold increase in expression. Female C57BL/6 mice were immunized using the rVV-Ag85 constructs, and interleukin-2 and gamma-interferon were assayed using a co-culture of immune splenocytes and recall antigen. There was a marked \*\*\*cytokine\*\*\* prodn. in mice immunized with the increase in tPA-contq. constructs. We report the first data demonstrating enhanced immunogenicity of rVV using a tPA signal sequence, which has significant implications for future vaccine design.
- RE.CNT 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT
- L6 ANSWER 6 OF 50 CAPLUS COPYRIGHT 2005 ACS on STN
- AN 1999:651483 CAPLUS
- DN 131:335735
- TI Characterization of human \*\*\*Mycobacterium\*\*\* bovis bacille calmette-guerin-reactive \*\*\*CD8\*\*\* + \*\*\*T\*\*\* \*\*\*cells\*\*\*
- AU Smith, Steven M.; Malin, Adam S.; Lukey, Pauline T.; Atkinson, Sara E.; Content, Jean; Huygen, Kris; Dockrell, Hazel M.
- CS Immunology Unit, Department of Infectious and Tropical Diseases, London School of Hygiene and Tropical Medicine, London, WC1E 7HT, UK
- SO Infection and Immunity (1999), 67(10), 5223-5230 CODEN: INFIBR; ISSN: 0019-9567
- PB American Society for Microbiology
- DT Journal
- LA English
- AB Gamma interferon (IFN-.gamma.)-secreting CD4+ \*\*\*T\*\*\* \*\*\*cells\*\*\*
  have long been established as an essential component of the protective
  immune response against \*\*\*Mycobacterium\*\*\* tuberculosis. It is now
  becoming evident from studies with the murine model of tuberculosis that

an important role also exists for major histocompatibility complex (MHC) class I-restricted \*\*\*CD8\*\*\* + \*\*\*T\*\*\* \*\*\*cells\*\*\* . These cells are capable of acting as both IFN-.gamma. secretors and cytotoxic T lymphocyte (CTL) effectors; however, their exact role in immunity against tuberculosis remains unclear. This study demonstrates the presence of \*\*\*Mycobacterium\*\*\* bovis BCG-reactive \*\*\*CD8\*\*\* + in healthy BCG-vaccinated donors and that these \*\*\*CD8\*\*\* \*\*\*cells\*\*\* \*\*\*cells\*\*\* are potent \*\*\*cytokine\*\*\* producers as well as cytotoxic effector cells. Using FACScan anal., we have shown that restimulation with live M. bovis BCG induced more \*\*\*CD8\*\*\* +- \*\*\*T\*\*\* - \*\*\*cell\*\*\* activation than the sol. antigen purified protein deriv. and that these cells are actively producing the type 1 \*\*\*cytokines\*\*\* IFN-.gamma. and tumor necrosis factor alpha (TNF-.alpha.). These \*\*\*CD8\*\*\* + \*\*\*T\*\*\* \*\*\*cells\*\*\* also contain the cytolytic granule perforin and are capable of acting as potent CTLs against M. bovis BCG-infected macrophages. The \*\*\*mycobacterial\*\*\* antigens 85A and B (Ag85A and Ag85B, resp.), and to a lesser extent the 19- and 38-kDa proteins, are major antigenic targets for these \*\*\*mycobacterium\*\*\* \*\*\*cells\*\*\* , while whole-M. bovis \*\*\*CD8\*\*\* + \*\*\*T\*\*\* -specific BCG activated effector cells from these BCG-vaccinated donors, as expected, failed to recognize the 6-kDa \*\*\*ESAT\*\*\* - \*\*\*6\*\*\* protein. The use of metabolic inhibitors and blocking antibodies revealed \*\*\*CD8\*\*\* + \*\*\*T\*\*\* \*\*\*cells\*\*\* recognize antigen that the processed and presented via the classical MHC class I pathway. These data suggest that \*\*\*CD8\*\*\* + \*\*\*T\*\*\* \*\*\*cells\*\*\* may play a crit. role in the human immune response to tuberculosis infection. RE.CNT 57 THERE ARE 57 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT ANSWER 7 OF 50 SCISEARCH COPYRIGHT (c) 2005 The Thomson Corporation on 2003:159522 SCISEARCH The Genuine Article (R) Number: 642ZC \*\*\*T\*\*\* Persistence and turnover of antigen-specific CD4 \*\*\*cells\*\*\* during chronic tuberculosis infection in the mouse Winslow G M (Reprint); Roberts A D; Blackman M A; Woodland D L Wadsworth Ctr, 120 New Scotland Ave, Albany, NY 12208 USA (Reprint); New

- L6
- AN
- GΑ
- ΤI
- ΑU
- CS York State Dept Hlth, Wadsworth Ctr, Albany, NY 12201 USA; Trudeau Inst Inc, Saranac Lake, NY 12983 USA
- CYA USA
- JOURNAL OF IMMUNOLOGY, (15 FEB 2003) Vol. 170, No. 4, pp. 2046-2052. SO Publisher: AMER ASSOC IMMUNOLOGISTS, 9650 ROCKVILLE PIKE, BETHESDA, MD 20814 USA.
  - ISSN: 0022-1767.
- DTArticle; Journal
- LAEnglish
- REC Reference Count: 35
  - \*ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS\*
- \*\*\*T\*\*\* AΒ \*\*\*cells\*\*\* are critical for resistance to \*\*\*Mycobacterium\*\*\* tuberculosis infection, but how effective \*\*\*cell\*\*\* responses are maintained during chronic infection is not well
  - understood. To address this question we examined the CD4 \*\*\*T\*\*\* \*\*\*cell\*\*\* response to a peptide from \*\*\*ESAT\*\*\* - \*\*\*6\*\*\* tuberculosis infection in the mouse. The FSAT-6(1-20) /IA(b)-specific CD4 \*\*\*T\*\*\* \*\*\*cell\*\*\* response in the lungs, mediastinal lymph nodes, and spleen reached maxima 3-4 wk postinfection, when the bacteria came

under the control of the immune response. Once chronic infection was established, the relative frequencies of Aq-specific CD4 \*\*\*T\*\*\* \*\*\*cells\*\*\* were maintained at nearly constant levels for at least 160 \*\*\*ESAT\*\*\* - \*\*\*6\*\*\* (1-20)/IA(b)-specific CD4 \*\*\*cells\*\*\* that responded in vitro expressed activation markers characteristic of chronically activated effector cells and used a limited Vbeta repertoire that was clonally stable in vivo for at least 12 wk. 5-Bromo-2-deoxyuridine incorporation studies indicated a relatively high rate of cell division among both total CD4 and ESAT61-20/IA b-specific CD4 \*\*\*T\*\*\* \*\*\*cells\*\*\* during acute infection, but the degree of 5-bromo-2-deoxyuridine incorporation by both the CD4 \*\*\*cells\*\*\* and the Ag-specific cells declined at least 3-fold during chronic infection. The data indicate that the peripheral \*\*\*ESAT\*\*\* \*\*\*6\*\*\* (1-20) / IA(b)-specific CD4 \*\*\*T\*\*\* \*\*\*cell\*\*\* response M. tuberculosis is characterized during the acute phase of infection by a period of extensive \*\*\*proliferation\*\*\* , but once bacterial control is achieved, this is followed during chronic infection by an extended containment phase that is associated with a persistent response of activated, yet more slowly \*\*\*proliferating\*\*\* , \*\*\*T\*\*\* \*\*\*cells\*\*\* ANSWER 8 OF 50 USPATFULL on STN 2005:49883 USPATFULL Diagnostic indicator of thymic function Boyd, Richard, Hampton, AUSTRALIA Chidgey, Ann Patricia, Black Rock, AUSTRALIA Monash University (non-U.S. corporation) US 2005042679 A1 20050224 US 2003-749120 A1 20031230 (10) Continuation-in-part of Ser. No. US 2004-399213, filed on 13 Feb 2004, PENDING A 371 of International Ser. No. WO 2001-AU1291, filed on 15 Oct 2001, UNKNOWN Continuation-in-part of Ser. No. US 2003-418953, filed on 18 Apr 2003, PENDING Continuation-in-part of Ser. No. US 2001-977074, filed on 12 Oct 2001, PENDING Continuation-in-part of Ser. No. US 2001-885268, filed on 1 Aug 2001, ABANDONED Continuation-in-part of Ser. No. US 2001-755965, filed on 5 Jan 2001, ABANDONED Continuation-in-part of Ser. No. US 2001-755983, filed on 5 Jan 2001, ABANDONED Continuation-in-part of Ser. No. US 2001-755646, filed on 5 Jan 2001, ABANDONED Continuation-in-part of Ser. No. US 2001-758910, filed on 10 Jan 2001, ABANDONED Continuation-in-part of Ser. No. US 2000-795286, filed on 13 Oct 2000, ABANDONED Continuation-in-part of Ser. No. US 2000-795302, filed on 13 Oct 2000, ABANDONED Continuation-in-part of Ser. No. US 2000-795286, filed on 13 Oct 2000, ABANDONED Continuation-in-part of Ser. No. US 2000-795302, filed on 13 Oct 2000, ABANDONED Continuation-in-part of Ser. No. US 2000-795286, filed on 13 Oct 2000, ABANDONED Continuation-in-part of Ser. No. US 2000-795302, filed on 13 Oct 2000, ABANDONED Continuation-in-part of Ser. No. US 2000-795286, filed on 13 Oct 2000, ABANDONED Continuation-in-part of Ser. No. US 2000-795302, filed on 13 Oct 2000, ABANDONED Continuation-in-part of Ser. No. WO 2000-AU329, filed on 17 Apr 2000, UNKNOWN PRAI AU 2000-745 20001013 AU 1999-9778 19990415 WO 2000-AU329 20000417 WO 2001-AU1291 20011015

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RLI

US 2003-527001P

20031205 (60)

DT Utility FS APPLICATION

LREP WILMER CUTLER PICKERING HALE AND DORR LLP, 60 STATE STREET, BOSTON, MA,

02109

CLMN Number of Claims: 60

ECL Exemplary Claim: CLM-01-37

DRWN 49 Drawing Page(s)

LN.CNT 5605

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present disclosure provides a method for determining whether a patient's immune system can be modified through stimulation of thymus function. In one embodiment, sex steroids are ablated in the patient, and the resulting production of thymic factors is monitored. In particular, the level of these factors in the patient's blood stream is observed. In another embodiment, the level of new \*\*\*T\*\*\*

\*\*\*cells\*\*\* is monitored. An early response, such as within hours or days of the ablation, indicates that the patient's thymus is disposed to

L6 ANSWER 9 OF 50 USPATFULL on STN

AN 2005:30317 USPATFULL

TI Vaccine

IN Laidlaw, Stephen, Wantage, UNITED KINGDOM
Skinner, Mike, Wantage, UNITED KINGDOM
Hill, Adrian V.S., Oxford, UNITED KINGDOM
Gilbert, Sarah C., Oxford, UNITED KINGDOM
Anderson, Richard, Headington, UNITED KINGDOM

regeneration through sex steroid ablation.

PA Isis Innovation Ltd., Oxford, UNITED KINGDOM (non-U.S. corporation)

PI US 2005025747 A1 20050203

AI US 2004-856118 A1 20040527 (10)

RLI Continuation of Ser. No. WO 2002-GB5411, filed on 2 Dec 2002, UNKNOWN

PRAI GB 2001-28733 20011130 . US 2001-334649P 20011130 (60)

DT Utility

FS APPLICATION

LREP HAMILTON, BROOK, SMITH & REYNOLDS, P.C., 530 VIRGINIA ROAD, P.O. BOX 9133, CONCORD, MA, 01742-9133

CLMN Number of Claims: 57

ECL Exemplary Claim: 1

DRWN 95 Drawing Page(s)

LN.CNT 8060

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to a fowlpox virus genome which has modifications in one or more wild-type FPV genes. The present invention also relates to a viral particle comprising such a genome and its use to deliver a nucleotide of interest (NOI) to a target cell. The present invention also relates to vaccination methods, particularly a method which comprises administering a priming composition (which comprises a first non-replicating viral vector) and a boosting composition (which comprises a second non-replicating viral vector) to a subject to treat and/or prevent a disease.

L6 ANSWER 10 OF 50 USPATFULL on STN

AN 2005:23975 USPATFULL

TI Hematopoietic stem cell gene therapy

IN Boyd, Richard L., Hampton, AUSTRALIA

PA Monash University (non-U.S. corporation)

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PΙ
       US 2005020524
                          A1
                               20050127
ΑI
       US 2003-748831
                               20031230 (10)
                          A1
       Continuation-in-part of Ser. No. US 2003-419068, filed on 18 Apr 2003,
RLI
       PENDING Continuation-in-part of Ser. No. US 2001-976712, filed on 12 Oct
       2001, ABANDONED Continuation-in-part of Ser. No. US 2001-969510, filed
       on 1 Oct 2001, ABANDONED Continuation-in-part of Ser. No. US
       2001-966576, filed on 26 Sep 2001, ABANDONED Continuation-in-part of
       Ser. No. US 2001-758910, filed on 10 Jan 2001, ABANDONED
       Continuation-in-part of Ser. No. US 2000-795286, filed on 13 Oct 2000,
       ABANDONED Continuation-in-part of Ser. No. US 2000-795302, filed on 13
       Oct 2000, ABANDONED Continuation-in-part of Ser. No. WO 2000-AU329,
       filed on 17 Apr 2000, UNKNOWN
PRAI
       AU 1999-9778
                           19990415
      AU 2000-745
                           20001013
       WO 2002-AU101291
                           20021015
       US 2003-527001P
                           20031205 (60)
DT
       Utility
       APPLICATION
FS
       WILMER CUTLER PICKERING HALE AND DORR LLP, 60 STATE STREET, BOSTON, MA,
LREP
       Number of Claims: 82
CLMN
ECL
       Exemplary Claim: 1
DRWN
       49 Drawing Page(s)
LN.CNT 5499
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present disclosure provides methods for gene therapy utilizing
AB
       hematopoietic stem cells, lymphoid progenitor cells, and/or myeloid
       progenitor cells. The cells are genetically modified to provide a gene
       that is expressed in these cells and their progeny after
       differentiation. In one embodiment the cells contain a gene or gene
       fragment that confers to the cells resistance to HIV infection and/or
       replication. The cells are administered to a patient in conjunction with
       treatment to reactivate the patient's thymus. The cells may be
       autologous, syngeneic, allogeneic or xenogeneic, as tolerance to foreign
       cells is created in the patient during reactivation of the thymus. In
       one embodiment the hematopoietic stem cells are CD34+. The patient's
       thymus is reactivated by disruption of sex steroid mediated signaling to
       the thymus. In another embodiment, this disruption is created by
       administration of LHRH agonists, LHRH antagonists, anti-LHRH receptor
       antibodies, anti-LHRH vaccines or combinations thereof.
     ANSWER 11 OF 50 USPATFULL on STN
L6
AN
       2005:16804 USPATFULL
TI
       Diagnostic assay for measuring a cell mediated immune response
IN
       Rothel, James Stuart, Victoria, AUSTRALIA
       Wild, Steven Paul, Victoria, AUSTRALIA
       Cosgriff, Angela, Victoria, AUSTRALIA
ΡI
       US 2005014205
                          A1
                               20050120
ΑI
       US 2004-477571
                          A1
                               20040915 (10)
       WO 2003-AU1464
                               20031106
PRAI
       AU 2002-2002952548 20021108
DT
       Utility
FS
       APPLICATION
LREP
       SCULLY SCOTT MURPHY & PRESSER, PC, 400 GARDEN CITY PLAZA, GARDEN CITY,
       NY, 11530
CLMN
       Number of Claims: 72
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ECL

Exemplary Claim: 1

DRWN 2 Drawing Page(s)

LN.CNT 1394

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates generally to a diagnostic assay and, more particularly, an assay for measuring cell-mediated immune reactivity. Even more particularly, the present invention provides an assay and a kit for measuring a cell-mediated response to an antigen using whole blood or other suitable biological sample. The assay may be conducted using ligands to immune effector molecules or at the nucleic acid level, screening for expression of genes encoding the immune effector molecules. The assay is useful in therapeutic and diagnostic protocols for human, livestock and veterinary and wild life applications.

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L6 ANSWER 12 OF 50 USPATFULL on STN
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AN 2005:3811 USPATFULL

TI Hematopoietic stem cell gene therapy

IN Boyd, Richard, Hampton, AUSTRALIA

PA Monash University (non-U.S. corporation)

PI US 2005002913 A1 20050106

AI US 2003-419068 A1 20030418 (10)

RLI Continuation-in-part of Ser. No. US 2001-976712, filed on 12 Oct 2001, ABANDONED Continuation-in-part of Ser. No. US 2001-969510, filed on 1 Oct 2001, ABANDONED Continuation-in-part of Ser. No. US 2001-966576, filed on 26 Sep 2001, ABANDONED Continuation-in-part of Ser. No. US 2001-758910, filed on 10 Jan 2001, ABANDONED Continuation-in-part of Ser. No. US 2000-795286, filed on 13 Oct 2000, ABANDONED Continuation-in-part of Ser. No. US 2000-795302, filed on 13 Oct 2000, ABANDONED Continuation-in-part of Ser. No. WO 2000-AU329, filed on 17 Apr 2000, UNKNOWN

PRAI AU 1999-9778 19990415 AU 2000-745 20001013 WO 2000-AU329 20000417 WO 2002-AU101291 20020418

DT Utility

FS APPLICATION

LREP WILMER CUTLER PICKERING HALE AND DORR LLP, 60 STATE STREET, BOSTON, MA, 02109

CLMN Number of Claims: 26 ECL Exemplary Claim: 1 DRWN 49 Drawing Page(s)

LN.CNT 4410

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present disclosure provides methods for gene therapy utilizing AΒ hematopoictic stem cells, lymphoid progenitor cells, and/or myeloid progenitor cells. The cells are genetically modified to provide a gene that is expressed in these cells and their progeny after differentiation. In one embodiment the cells contain a gene or gene fragment that confers to the cells resistance to HIV infection and/or replication. The cells are administered to a patient in conjunction with treatment to reactivate the patient's thymus. The cells may be autologous, syngeneic, allogeneic or xenogeneic, as tolerance to foreign cells is created in the patient during reactivation of the thymus. In one embodiment the hematopoietic stem cells are CD34.sup.+. The patient's thymus is reactivated by disruption of sex steroid mediated signaling to the thymus. In another embodiment, this disruption is created by administration of LHRH agonists, LHRH antagonists, anti-LHRH receptor antibodies, anti-LHRH vaccines or combinations thereof.

```
ANSWER 13 OF 50 USPATFULL on STN
L6
AN
       2004:321694 USPATFULL
ΤI
         ***Mycobacterial***
                               antigens expressed under low oxygen tension
       James, Brian William, Wiltshire, UNITED KINGDOM
IN
       Bacon, Joanna, Wiltshire, UNITED KINGDOM
       Marsh, Philip, Wiltshire, UNITED KINGDOM
                               20041216
PΙ
       US 2004254349
                         A1
ΑI
       US 2004-481265
                          A1
                               20040719 (10)
       WO 2002-GB2845
                               20020621
PRAI
       GB 2001-15365
                           20010622
       GB 2001-21780
                           20010907
DT
       Utility
FS
       APPLICATION
       Sterne Kessler, Goldstein & Fox, Suite 600, 1100 New York Avenue NW,
LREP
       Washington, DC, 20005-3934
CLMN
       Number of Claims: 22
ECL
       Exemplary Claim: 1
       No Drawings
DRWN
LN.CNT 7013
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       A method is provided for identifying
                                              ***mycobacterial***
       are induced or up-regulated under continuous culture conditions defined
       by a dissolved oxygen tension of up to 10% air saturation measured at
       37.degree. C. when compared with a dissolved oxygen tension of at least
       40% air saturation measured at 37.degree. C. Said induced or
       up-regulated genes form the basis of nucleic acid vaccines, or provide
       targets to allow preparation of attenuated ***mycobacteria*** for
                        ***mycobacterial*** infections. Similarly, peptides
       vaccines against
       encoded by said induced or up-regulated genes are employed in vaccines.
       In a further embodiment, the identified genes/peptides provide the means
       for identifying the presence of a ***mycobacterial*** infection in a
       clinical sample by nucleic acid probe or antibody detection.
L6
     ANSWER 14 OF 50 USPATFULL on STN
       2004:321058 USPATFULL
ΑN
         ***Mycobacterial***
                              genes down-regulated during latency
ΤI
IN
       James, Brian William, Salisbury Wiltshire, UNITED KINGDOM
       Hampshire, Tobias, Salisbury Wiltshire, UNITED KINGDOM
       Marsh, Philip, Salisbury Wiltshire, UNITED KINGDOM
PΙ
       US 2004253711
                         A1
                               20041216
       US 2004-493462
                               20040812 (10)
ΑI
                          A1
       WO 2002-GB4718
                               20021021
PRAI
       GB 2001-25535
                           20011024
DT
       Utility
FS
       APPLICATION
LREP
       Sterne Kessler, Goldstein & Fox, Suite 600, 1100 New York Avenue NW,
       Washington, DC, 20005-3934
CLMN
       Number of Claims: 28
ECL
       Exemplary Claim: 1
DRWN
       4 Drawing Page(s)
LN.CNT 4422
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       A method is provided for identifying
                                            ***mycobacterial***
AB
       expression of which is down-regulated during a stationary phase culture
       of ***mycobacteria*** under nutrient-starving conditions when
       compared with an exponential phase culture of ***mycobacteria***
```

under culture conditions that are not nutrient-starving and that support \*\*\*mycobacteria\*\*\* . The described method exponential growth of said optionally provides for identifying \*\*\*mycobacterial\*\*\* genes that are simultaneously down-regulated under low DOT conditions. The down-regulated genes of the present invention form the basis of nucleic acid vaccines, or provide targets to allow preparation of attenuated \*\*\*mycobacteria\*\*\* for vaccines against \*\*\*mycobacterial\*\*\* infections. Similarly, peptides encoded by said down-regulated genes are employed in vaccines. In a further embodiment, the identified genes/peptides provide the means for identifying the presence of a \*\*\*mycobacterial\*\*\* infection in a clinical sample by nucleic acid probe or antibody detection.

```
ANSWER 15 OF 50 USPATFULL on STN
L6
AN
       2004:307171 USPATFULL
       Stimulation of thymus for vaccination development
ΤI
IN
       Boyd, Richard L., Hampton, AUSTRALIA
       Monash University (non-U.S. corporation)
PA
                          A1
                               20041202
PΙ
       US 2004241842
       US 2003-748450
                               20031230 (10)
ΑI
                          A1
       Continuation-in-part of Ser. No. US 2003-418747, filed on 18 Apr 2003,
RLI
       PENDING Continuation-in-part of Ser. No. US 2001-977479, filed on 12 Oct
       2001, PENDING Continuation-in-part of Ser. No. US 2001-965394, filed on
       26 Sep 2001, ABANDONED Continuation-in-part of Ser. No. US 2001-755965,
       filed on 5 Jan 2001, ABANDONED Continuation-in-part of Ser. No. US
       2001-755983, filed on 5 Jan 2001, ABANDONED Continuation-in-part of Ser.
       No. US 2001-755646, filed on 5 Jan 2001, ABANDONED Continuation-in-part
       of Ser. No. US 2001-758910, filed on 10 Jan 2001, ABANDONED
       Continuation-in-part of Ser. No. US 2000-795286, filed on 13 Oct 2000,
       ABANDONED Continuation-in-part of Ser. No. US 2000-795302, filed on 13
       Oct 2000, ABANDONED Continuation-in-part of Ser. No. US 2000-795286,
       filed on 13 Oct 2000, ABANDONED Continuation-in-part of Ser. No. US
       2000-795302, filed on 13 Oct 2000, ABANDONED Continuation-in-part of
       Ser. No. US 2000-795286, filed on 13 Oct 2000, ABANDONED
       Continuation-in-part of Ser. No. US 2000-795302, filed on 13 Oct 2000,
       ABANDONED Continuation-in-part of Ser. No. US 2000-795286, filed on 13
       Oct 2000, ABANDONED Continuation-in-part of Ser. No. US 2000-795302,
       filed on 13 Oct 2000, ABANDONED Continuation-in-part of Ser. No. WO
       2000-AU329, filed on 17 Apr 2000, UNKNOWN Continuation-in-part of Ser.
       No. WO 2000-AU329, filed on 17 Apr 2000, UNKNOWN
PRAI
       WO 2001-AU1291
                           20011015
       AU 1999-9778
                           19990415
       AU 2000-745
                           20001013
       US 2003-527001P
                           20031205 (60)
DT
       Utility
FS
       APPLICATION
       Shann Kerner, Ph.D., HALE AND DORR LLP, 60 State Street, Boston, MA,
LREP
       Number of Claims: 60
CLMN
       Exemplary Claim: CLM-01-14
ECL
DRWN
       49 Drawing Page(s)
LN.CNT 5377
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AΒ
       The present disclosure provides methods for enhancing the response of a
       patient's immune system to vaccination. This is accomplished by
       reactivating the thymus. Optionally, hematopoietic stem cells,
```

autologous, syngeneic, allogeneic or xenogeneic, are delivered to

increase the speed of regeneration of the patient's immune system. In one embodiment the hematopoietic stem cells are CD34.sup.+. The patient's thymus is reactivated by disruption of sex steroid mediated signaling to the thymus. In one embodiment, this disruption is created by administration of LHRH agonists, LHRH antagonists, anti-LHRH receptor antibodies, anti-LHRH vaccines or combinations thereof.

```
L6
     ANSWER 16 OF 50 USPATFULL on STN
AN
       2004:307155 USPATFULL
TI
         ***Mycobacterial***
                               antigens expressed during latency
IN
       James, Brian William, Salisbury, UNITED KINGDOM
       Marsh, Philip, Salisbury, UNITED KINGDOM
       Hampshire, Tobias, Salisbury, UNITED KINGDOM
PΙ
       US 2004241826
                          A1
                               20041202
ΑI
       US 2004-482706
                          A1
                               20040719 (10)
       WO 2002-GB3052
                               20020704
PRAI
       GB 2001-16385
                           20010704
DT
       Utility
FS
       APPLICATION
       STERNE, KESSLER, GOLDSTEIN & FOX PLLC, 1100 NEW YORK AVENUE, N.W.,
LREP
       WASHINGTON, DC, 20005
CLMN
       Number of Claims: 21
ECL
       Exemplary Claim: 1
DRWN
       4 Drawing Page(s)
LN.CNT 3180
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
                                              ***mycobacterial***
       A method is provided for identifying
       are induced or up-regulated under culture conditions that are
       nutrient-starving and which maintain ***mycobacterial***
                                                                    latency,
       said conditions being obtainable by batch fermentation of a
         ***mycobacterium***
                               for at least 20 days post-inoculation, when
       compared with culture conditions that are not nutrient-starving and
       which support exponential growth of said
                                                 ***mycobacterium*** . Said
       induced or up-regulated genes form the basis of nucleic acid vaccines,
       or provide targets to allow preparation of attenuated
         ***mycobacteria***
                                                     ***mycobacterial***
                              for vaccines against
       infections. Similarly, peptides encoded by said induced or up-regulated
       genes are employed in vaccines. In a further embodiment, the identified
       genes/peptides provide the means for identifying the presence of a
         ***mycobacterial*** infection in a clinical sample by nucleic acid
       probe or antibody detection.
L6
    ANSWER 17 OF 50 USPATFULL on STN
ΑN
       2004:291796 USPATFULL
ΤI
       Listeria attenuated for entry into non-phagocytic cells, vaccines
       comprising the listeria, and methods of use thereof
       Dubensky, Thomas W., JR., Piedmont, CA, UNITED STATES
IN
       Brockstedt, Dirk G., Oakland, CA, UNITED STATES
       Cook, David, Lafayette, CA, UNITED STATES
PΙ
       US 2004228877
                          A1
                               20041118
ΑI
       US 2004-773792
                          A1
                               20040206 (10)
PRAI
       US 2003-446051P
                           20030206 (60)
                           20030221 (60)
       US 2003-449153P
       US 2003-490089P
                           20030724 (60)
       US 2003-511719P
                           20031015 (60)
       US 2003-511919P
                           20031015 (60)
       US 2003-511869P
                           20031015 (60)
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US 2004-541515P 20040202 (60) DT Utility FS APPLICATION MORRISON & FOERSTER LLP, 755 PAGE MILL RD, PALO ALTO, CA, 94304-1018 LREP Number of Claims: 60 CLMN ECL Exemplary Claim: 1 DRWN 26 Drawing Page(s) LN.CNT 3714 CAS INDEXING IS AVAILABLE FOR THIS PATENT. AB The present invention provides Listeria that are attenuated for entry into non-phagocytic cells as well as a variety of methods of inducing immune responses involving administering compositions comprising the attenuated Listeria. Some of the attenuated Listeria are mutant Listeria that comprise at least one mutation in a gene encoding an invasin, such as an internalin. Some of the attenuated Listeria are further attenuated for cell-to-cell spread. Pharmaceutical compositions and vaccines useful in the methods of the invention are further provided. Methods of making and improving vaccines are also provided. L6 ANSWER 18 OF 50 USPATFULL on STN AN 2004:253818 USPATFULL TI Modified free-living microbes, vaccine compositions and methods of use thereof IN Dubensky, Thomas W., JR., Piedmont, CA, UNITED STATES Brockstedt, Dirk G., Oakland, CA, UNITED STATES Bahjat, Keith, Concord, CA, UNITED STATES Hearst, John E., Berkeley, CA, UNITED STATES Cook, David, Lafayette, CA, UNITED STATES ΡI US 2004197343 A1 20041007 US 2004-773618 ΑI Α1 20040206 (10) US 2003-446051P PRAI 20030206 (60) US 2003-449153P 20030221 (60) US 2003-490089P 20030724 (60) US 2003-511869P 20031015 (60) US 2004-541515P 20040202 (60) DTUtility FS APPLICATION LREP MORRISON & FOERSTER LLP, 755 PAGE MILL RD, PALO ALTO, CA, 94304-1018 CLMN Number of Claims: 82 ECL Exemplary Claim: 1 51 Drawing Page(s) DRWN LN.CNT 7204 CAS INDEXING IS AVAILABLE FOR THIS PATENT. AB Free-living microbes are provided in which the nucleic acid has been modified so that the microbe is attenuated for \*\*\*proliferation\*\*\* and/or which comprise genetic mutations that attenuate the ability of the microbe to repair its nucleic acid. Methods of using the modified microbes for the loading, activation, and/or maturation of . antigen-presenting cells are also provided. Vaccine compositions comprising the modified microbes and/or the antigen-presenting cells and methods of using the vaccines are also provided. The microbes may be further modified to include heterologous antigens, such as tumor antigens or infectious disease antigens, for use as a vaccine against cancer or infectious diseases. L6 ANSWER 19 OF 50 USPATFULL on STN AN 2004:190178 USPATFULL

```
ΤI
       Compositions and methods for targeting antigen-presenting cells with
       antibody single-chain variable region fragments
IN
       Britton, Warwick, Bardwell Park, AUSTRALIA
       Demangel, Caroline, Paris, FRANCE
       CENTENARY INSTITUTE OF CANCER MEDICINE AND CELL BIOLOGY, Camperdown,
PA
       AUSTRALIA, 2050 (non-U.S. corporation)
                               20040729
PΙ
       US 2004146948
                          A1
      US 2003-689921
                               20031017 (10)
                          A1
ΑI
PRAI
       US 2002-420232P
                           20021018 (60)
DT
       Utility
FS
      APPLICATION
      'SPECKMAN LAW GROUP PLLC, 1501 WESTERN AVE, SEATTLE, WA, 98101
CLMN
      Number of Claims: 49
      Exemplary Claim: 1
ECL
DRWN
       9 Drawing Page(s)
LN.CNT 2038
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       Provided are single-chain Fv (scFv) fragment-based compositions and
       methods for targeting antigens to antigen-presenting cells (APCs) such
       as, for example, dendritic cells (DC). Compositions and methods
       disclosed herein are useful in the treatment of diseases including
       infectious diseases and cancer.
     ANSWER 20 OF 50 USPATFULL on STN
L6
AN
       2004:184102 USPATFULL
ΤI
       Tuberculosis vaccine
       Lalvani, Ajit, Oxford, UNITED KINGDOM
IN
       Pathan, Ansar A., Oxford, UNITED KINGDOM
       ISIS INNOVATION LIMITED, Oxford, UNITED KINGDOM (non-U.S. corporation)
PA
                               20040722
PΙ
       US 2004141985
                          A1
                               20031126 (10)
ΑI
       US 2003-721798
                          Α1
       Division of Ser. No. US 2001-916201, filed on 27 Jul 2001, ABANDONED
RLI
       Continuation-in-part of Ser. No. US 1999-467893, filed on 21 Dec 1999,
       ABANDONED
                           19981223 (60)
      US 1998-113783P
PRAI
DT
      Utility
      APPLICATION
FS
       NIXON & VANDERHYE, PC, 1100 N GLEBE ROAD, 8TH FLOOR, ARLINGTON, VA,
LREP
       22201-4714
      Number of Claims: 27
CLMN
ECL
       Exemplary Claim: 1
DRWN
       4 Drawing Page(s)
LN.CNT 1505
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       A method of detecting an anti- ***mycobacterial***
                                                               ***CD8***
AB
                                  response comprising contacting a population of
         ***T***
                     ***cell***
                       ***T***
                                   ***cells*** of an individual with one or
         ***CD8***
       more peptides selected from the peptides represented by SEQ ID NO: 3, 4,
       7, 8, 9, 10, 11 or 12, and, optionally, one or two further peptides
       represented by SEQ ID NO: 1 and/or 2, wherein one or more of said
       peptides may be substituted by an analogue which binds a
                    receptor which recognises the corresponding substituted
       peptide, and determining whether
                                          ***CD8***
                                                        ***T***
                                                                     ***cells***
                ***CD8***
                            ***T***
                                          ***cell***
                                                       population recognize the
       of the
       peptide(s).
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The invention also provides a method of vaccinating against infection by

```
***mycobacterium*** , wherein the vaccination leads to a
                   ***T***
                                 ***cell*** response, comprising
       administering (i) a ***CD8*** ***T*** ***cell*** epitope of
       a ***mycobacterium*** protein, (ii) an analogue of the epitope which
       is capable of inhibiting the binding of the epitope to a ***T***
         ***cell*** receptor, (iii) a precursor or (i) or (ii) which is
capable
       of being processed to provide (i) or (ii), or (iv) a polynucleotide
      which is capable of being expressed to provide (i), (ii) or (iii).
    ANSWER 21 OF 50 USPATFULL on STN
L6
AN
       2004:144604 USPATFULL
       Protection against ***mycobacterial***
ΤI
                                                 infections
      Vipond, Richard, Wiltshire, UNITED KINGDOM
IN
       Shuttleworth, Helen, Salisbury Wiltshire, UNITED KINGDOM
      Ambrose, Emma, Alberta, CANADA
      Minton, Nigel Peter, Wiltshire, UNITED KINGDOM
PΙ
      US 2004110269
                        A1
                              20040610
AΙ
      US 2004-432934
                        A1
                              20040210 (10)
      WO 2001-GB5250
                              20011128
PRAI
      GB 2000-28966
                          20001128
DT
      Utility
FS
      APPLICATION
LREP
      Sterne Kessler, Goldstein & Fox, Suite 600, 1100 New York Avenue NW,
      Washington, DC, 20005-3934
CLMN
      Number of Claims: 29
ECL
      Exemplary Claim: 1
      No Drawings
DRWN
LN.CNT 5805
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention relates to a method of identifying
AB
         ***mycobacterial*** genes which were induced or up-regulated during
Μ.
       tuberculosis virulence, and to isolated peptide products of said genes.
      Also provided, are inhibitors of said genes, and antibodies which bind
       to said peptide products. Further embodiments include DNA and RNA
       vectors encoding said products, attenuated ***mycobacteria***
       which the activity of at least one of said genes or peptide products has
      been modified, vaccines against ***mycobacterial*** infections, and
      methods of detecting a ***mycobacterial*** infection.
L6
    ANSWER 22 OF 50 USPATFULL on STN
       2004:113684 USPATFULL
AN
                          ***mycobacterium***
ΤI
       Fusion proteins of
                                                 tuberculosis
       Skeiky, Yasir, Seattle, WA, UNITED STATES
IN
       Reed, Steven, Bellevue, WA, UNITED STATES
      Alderson, Mark, Bainbridge Island, WA, UNITED STATES
PΙ
      US 2004086523
                         A1
                              20040506
ΑI
      US 2001-886349
                         A1
                              20010620 (9)
RLI
      Continuation-in-part of Ser. No. US 2000-597796, filed on 20 Jun 2000,
       PENDING
PRAI
      US 2001-265737P
                          20010201 (60)
DT
      Utility
FS
      APPLICATION
      TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH
LREP
      FLOOR, SAN FRANCISCO, CA, 94111-3834
      Number of Claims: 88
CLMN
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ECL Exemplary Claim: 1 DRWN 7 Drawing Page(s) LN.CNT 5261 CAS INDEXING IS AVAILABLE FOR THIS PATENT. The present invention relates to compositions and fusion proteins \*\*\*Mycobacterium\*\*\* containing at least two sp. antigens, and nucleic acids encoding such compositions and fusion proteins. The compositions of the invention increase serological sensitivity of sera from individuals infected with tuberculosis, and methods for their use in the diagnosis, treatment, and prevention of tuberculosis infection. L6 ANSWER 23 OF 50 USPATFULL on STN AN 2004:78909 USPATFULL Non-stochastic generation of genetic vaccines and enzymes TI Short, Jay M., Rancho Santa Fe, CA, United States IN Diversa Corporation, San Diego, CA, United States (U.S. corporation) PA 20040330 PI US 6713279 В1 US 2000-498557 20000204 (9) ΑI Continuation-in-part of Ser. No. US 2000-495052, filed on 31 Jan 2000, RLI now patented, Pat. No. US 6479253 Continuation-in-part of Ser. No. US 1999-332835, filed on 14 Jun 1999, now patented, Pat. No. US 6537776 Continuation-in-part of Ser. No. US 1999-276860, filed on 26 Mar 1999, now patented, Pat. No. US 6352842 Continuation-in-part of Ser. No. US 1999-267118, filed on 9 Mar 1999, now patented, Pat. No. US 6238884 Continuation-in-part of Ser. No. US 1999-246178, filed on 4 Feb 1999, now patented, Pat. No. US 6171820 Continuation-in-part of Ser. No. US 1998-185373, filed on 3 Nov 1998, now patented, Pat. No. US 6335179 Continuation of Ser. No. US 1996-760489, filed on 5 Dec 1996, now patented, Pat. No. US 5830696 Continuation-in-part of Ser. No. US 1997-962504, filed on 31 Oct 1997 Continuation-in-part of Ser. No. US 1996-677112, filed on 9 Jul 1996, now patented, Pat. No. US 5965408 Continuation-in-part of Ser. No. US 1996-651568, filed on 22 May 1996, now patented, Pat. No. US 5939250 PRAI US 1995-8311P 19951207 (60) US 1995-8316P 19951207 (60) DTUtility FS GRANTED EXNAM Primary Examiner: Park, Hankyel T. Love, Jane M., Butler, James E. LREP Number of Claims: 105 CLMN ECT. Exemplary Claim: 1 DRWN 73 Drawing Figure(s); 64 Drawing Page(s) LN.CNT 19098 CAS INDEXING IS AVAILABLE FOR THIS PATENT. This invention provides methods of obtaining novel polynucleotides and AB encoded polypeptides by use of non-stochastic methods of directed evolution (DirectEvolution.TM.). These methods include non-stochastic polynucleotide site-saturation mutagenesis (Gene Site Saturation Mutagenesis.TM.) and non-stochastic polynucleotide reassembly (GeneReassembly.TM.). Through use of the claimed methods, genetic vaccines, enzymes, and other desirable molecules can be evolved towards desirable properties. For example, vaccine vectors can be obtained that

exhibit increased efficacy for use as genetic vaccines. Vectors obtained by using the methods can have, for example, enhanced antigen expression, increased uptake into a cell, increased stability in a cell, ability to tailor an immune response, and the like. This invention provides methods of obtaining novel enzymes that have optimized physical &/or biological

properties. Furthermore, this invention provides methods of obtaining a variety of novel biologically active molecules, in the fields of antibiotics, pharmacotherapeutics, and transgenic traits.

```
ANSWER 24 OF 50 USPATFULL on STN
L6
       2004:76621 USPATFULL
AN
ΤI
       Assay to determine efficacy of treatment for ***mycobacterial***
       infection
       Lalvani, Ajit, John Radcliffe Hospital Headington, UNITED KINGDOM
IN
PΙ
       US 2004058399
                          A1
                               20040325
                               20031023 (10)
ΑI
       US 2003-451918
                          A1
       WO 2002-GB55
                               20020108
                           20010108
PRAI
       GB 2001-432
DT
       Utility
FS
      APPLICATION
LREP
       Nixon & Vanderhye, 8th Floor, 1100 North Glebe Road, Arlington, VA,
       22201-4714
CLMN
       Number of Claims: 22
ECL
       Exemplary Claim: 1
       7 Drawing Page(s)
DRWN
LN.CNT 1601
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB
       Method of determining the efficacy of treatment for
                               infection in an individual comprising determining
         ***mycobacterial***
       in samples from the individual whether the level of
         ***cells***
                       specific for a ***mycobacterial***
                                                              antigen has
       decreased after the treatment, thereby determining the efficacy of the
       treatment.
     ANSWER 25 OF 50 USPATFULL on STN
L6
       2004:76186 USPATFULL
AN
ΤI
     · Therapeutic TB vaccine
TN
       Andersen, Peter, Bronshoj, DENMARK
       Rosenkrands, Ida, Vaerlose, DENMARK
       Stryhn, Anette, Virum, DENMARK
                         A1
PΙ
       US 2004057963
                               20040325
ΑI
       US 2003-617038
                          A1
                               20030711 (10)
PRAI
       DK 2002-1098
                           20020713
       US 2002-401725P
                           20020807 (60)
DT
       Utility
FS
       APPLICATION
LREP
       HOWSON AND HOWSON, ONE SPRING HOUSE CORPORATION CENTER, BOX 457, 321
      NORRISTOWN ROAD, SPRING HOUSE, PA, 19477
CLMN
       Number of Claims: 22
ECL
       Exemplary Claim: 1
DRWN
       7 Drawing Page(s)
LN.CNT 6018
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       Therapeutic vaccines comprising polypeptides expressed during the latent
AB
                  ***mycobacteria*** infection are provided, as are
       multiphase vaccines, and methods for treating and preventing
       tuberculosis.
    ANSWER 26 OF 50 USPATFULL on STN
L6
       2004:24343 USPATFULL
AN
ΤI
       Stimulation of thymus for vaccination development
```

Boyd, Richard Lennox, Hampton, AUSTRALIA

IN

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20040129
PI
       US 2004018180
                          Α1
ΑI
       US 2003-418747
                          A1
                               20030418 (10)
       Continuation-in-part of Ser. No. US 2001-977479, filed on 12 Oct 2001,
RLI
       PENDING Continuation-in-part of Ser. No. US 2001-965394, filed on 26 Sep
       2001, ABANDONED Continuation-in-part of Ser. No. US 2001-755965, filed
       on 5 Jan 2001, ABANDONED Continuation-in-part of Ser. No. US
       2000-795286, filed on 13 Oct 2000, ABANDONED Continuation-in-part of
       Ser. No. US 2000-795302, filed on 13 Oct 2000, ABANDONED
PRAI
       AU 2000-745
                           20001013
       AU 1999-9778
                           19990415
       WO 2000-AU329
                           20000417
       Utility
DT
FS
       APPLICATION
LREP
       HALE AND DORR, LLP, 60 STATE STREET, BOSTON, MA, 02109
CLMN
       Number of Claims: 14
       Exemplary Claim: 1
ECL
DRWN
       45 Drawing Page(s)
LN.CNT 4303
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present disclosure provides methods for enhancing the response of a
AB
       patient's immune system to vaccination. This is accomplished by
       reactivating the thymus. Optionally, hematopoietic stem cells,
       autologous, syngeneic, allogeneic or xenogeneic, are delivered to
       increase the speed of regeneration of the patient's immune system. In
       one embodiment the hematopoietic stem cells are CD34.sup.+. The
       patient's thymus is reactivated by disruption of sex steroid mediated
       signaling to the thymus. In one embodiment, this disruption is created
       by administration of LHRH agonists, LHRH antagonists, anti-LHRH receptor
       antibodies, anti-LHRH vaccines or combinations thereof.
L6
     ANSWER 27 OF 50 USPATFULL on STN
       2004:24340 USPATFULL
AN
TΙ
       Vacination method
       Hill, Adrian V.S., Oxford, UNITED KINGDOM
IN
       McShane, Helen, Oxford, UNITED KINGDOM
       Gilbert, Sarah, Oxford, UNITED KINGDOM
       Schneider, Joerg, Oxford, UNITED KINGDOM
ΡI
       US 2004018177
                          A1
                               20040129
ΑI
       US 2003-345000
                          Α1
                               20030715 (10)
       WO 2001-GB4116
                               20010913
PRAI
       GB 2000-232033
                           20000921
DΤ
       Utility
       APPLICATION
FS
       NIXON & VANDERHYE, PC, 1100 N GLEBE ROAD, 8TH FLOOR, ARLINGTON, VA,
LREP
       22201-4714
       Number of Claims: 23
CLMN
ECL
       Exemplary Claim: 1
DRWN
       6 Drawing Page(s)
LN.CNT 1531
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
                                                        ***T*** - ***cell***
AΒ
       There is provided a method of inducing a CD4+
       response against a target antigen, by administering a composition a
       source of one or more CD4+ epitopes is a non-replicating or replication
       impaired recombinant poxvirus vector.
```

Monash University (non-U.S. corporation)

PA

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2004:4297 USPATFULL
ΑN
ΤI
       Tuberculosis vaccine
       Kaufmann, Stefan H. E., Berlin, GERMANY, FEDERAL REPUBLIC OF
IN
       Hess, Jurgen, Berlin, GERMANY, FEDERAL REPUBLIC OF
       Max-Planck-Gesellschaft zur Forderung der Wissenschaften e.V., GERMANY,
PA
       FEDERAL REPUBLIC OF (non-U.S. corporation)
       US 6673353
                               20040106
PΤ
                          В1
       WO 9910496 19990304
       US 2000-485717
                               20000222 (9)
ΑI
       WO 1998-EP5109
                               19980812
PRAI
       EP 1997-114614
                           19970822
DT
       Utility
FS
       GRANTED
      Primary Examiner: Swartz, Rodney P
EXNAM
       Rothwell, Figg, Ernst & Manbeck
LREP
CLMN
       Number of Claims: 33
ECL
       Exemplary Claim: 1
DRWN
       7 Drawing Figure(s); 6 Drawing Page(s)
LN.CNT 1137
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB
       The present invention relates to novel recombinant vaccines providing
       protective immunity against tuberculosis. Further, the present invention
       refers to novel recombinant nucleic acid molecules, vectors containing
       said nucleic acid molecules, cells transformed with said nucleic acid
       molecules and polypeptides encoded by said nucleic acid molecules.
L6
    ANSWER 29 OF 50 USPATFULL on STN
AN
       2004:1847 USPATFULL
ΤI
       Attenuated ***mycobacterium***
                                          tuberculosis vaccines
IN
       Jacobs, William R., Pelham, NY, UNITED STATES
       Hsu, Tsungda, Bronx, NY, UNITED STATES
       Bardarov, Stoyan, Bronx, NY, UNITED STATES
       Sambandamurthy, Vasan, Worcester, MA, UNITED STATES LR.
PΙ
       US 2004001866
                        A1
                               20040101
ΑI
       US 2003-351452
                         A1
                               20030124 (10)
PRAI
       US 2002-358152P
                         20020219 (60)
DT
       Utility
FS
       APPLICATION
       Elie H. Gendloff, Craig J. Arnold, Alan D. Miller, Amster, Rothstein & .
LREP
       Ebenstein, 90 Park Avenue, New York, NY, 10016
CLMN
       Number of Claims: 125
ECL
       Exemplary Claim: 1
DRWN
       22 Drawing Page(s)
LN.CNT 3313
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       Non-naturally occurring
                                 ***mycobacteria***
AB
                                                      in the
         ***Mycobacterium***
                             tuberculosis complex are provided. These
         ***mycobacteria***
                             have a deletion of an RD1 region or a region
       controlling production of a vitamin, and exhibit attenuated virulence in
       a mammal when compared to the ***mycobacteria***
                                                            without the
                                                             ***mycobacteria***
       deletion. Also provided are non-naturally occurring
       that have a deletion of a region controlling production of lysine, and
         ***mycobacteria*** comprising two attenuating deletions. Vaccines
       comprising these ***mycobacteria*** are also provided, as are
                                                   ***mycobacteria***
       methods of protecting mammals from virulent
       the vaccines. Also provided are methods of preparing these vaccines
       which include the step of deleting an RD1 region or a region controlling
```

production of a vitamin from a \*\*\*mycobacterium\*\*\* in the M. tuberculosis complex.

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L6
     ANSWER 30 OF 50 USPATFULL on STN
       2004:1830 USPATFULL
AN
ΤI
       Antigen library immunization
       Punnonen, Juha, Belmont, CA, UNITED STATES
IN
       Bass, Steven H., Hillsborough, CA, UNITED STATES
       Whalen, Robert Gerald, Foster City, CA, UNITED STATES
       Howard, Russell, Los Altos Hills, CA, UNITED STATES
       Stemmer, Willem P.C., Los Gatos, CA, UNITED STATES
      Maxygen, Inc., a Delaware corporation (U.S. corporation)
PA
PΙ
       US 2004001849
                          A1
                               20040101
ΑI
      US 2003-383317
                          A1
                               20030307 (10)
       Continuation of Ser. No. US 2000-724852, filed on 28 Nov 2000, GRANTED,
RLI
       Pat. No. US 6576757 Continuation of Ser. No. US 1999-247890, filed on 10
       Feb 1999, GRANTED, Pat. No. US 6541011
       US 1998-105509P
                           19981023 (60)
PRAI
       US 1998-74294P
                           19980211 (60)
DΤ
      Utility
FS
      APPLICATION
LREP
      MAXYGEN, INC., INTELLECTUAL PROPERTY DEPARTMENT, 515 GALVESTON DRIVE,
       RED WOOD CITY, CA, 94063
      Number of Claims: 53
CLMN
ECL
       Exemplary Claim: 1
DRWN
       21 Drawing Page(s)
LN.CNT 5367
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       This invention is directed to antigen library immunization, which
       provides methods for obtaining antigens having improved properties for
       therapeutic and other uses. The methods are useful for obtaining
       improved antigens that can induce an immune response against pathogens,
       cancer, and other conditions, as well as antigens that are effective in
      modulating allergy, inflammatory and autoimmune diseases.
L6
    ANSWER 31 OF 50 USPATFULL on STN
AN
       2003:318279 USPATFULL
ΤI
      Methods of using epitope peptides of human pathogens
IN
       Conti-Fine, Bianca M., Minneapolis, MN, UNITED STATES
PA
       Regents of the University of Minnesota (U.S. corporation)
PΙ
      US 2003224021
                          A1
                               20031204
      US 2003-356765 .
                               20030130 (10)
ΑI
                          A1
RLI
      Continuation of Ser. No. US 1998-199748, filed on 25 Nov 1998, ABANDONED
DT
      Utility
FS
      APPLICATION
LREP
      SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A., P.O. BOX 2938, MINNEAPOLIS,
      MN, 55402
CLMN
      Number of Claims: 67
ECL
      Exemplary Claim: 1
DRWN
       10 Drawing Page(s)
LN.CNT 2599
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       Isolated and purified
                              ***T***
                                           ***cell***
                                                        epitope peptides and
       variants thereof, useful to immunize a mammal, e.g., a human, against an
       infectious pathogen are provided. Also provided are methods to identify
```

and use the peptides.

ANSWER 32 OF 50 USPATFULL on STN L6

2003:312155 USPATFULL ΑN

Novel antigen binding molecules for therapeutic, diagnostic, TI prophylactic, enzymatic, industrial, and agricultural applications, and methods for generating and screening thereof

Short, Jay M., Rancho Santa Fe, CA, UNITED STATES IN

Diversa Corporation, San Diego, CA, UNITED STATES, 92121 (U.S. PA corporation)

US 2003219752 A1 20031127 . PΙ

A1 20020517 (10) ΑI US 2002-151469

Continuation-in-part of Ser. No. US 2000-535754, filed on 27 Mar 2000, RLI GRANTED, Pat. No. US 6361974 Continuation-in-part of Ser. No. US 2000-522289, filed on 9 Mar 2000, GRANTED, Pat. No. US 6358709 Continuation-in-part of Ser. No. US 2000-498557, filed on 4 Feb 2000, ABANDONED Continuation-in-part of Ser. No. US 2000-495052, filed on 31 Jan 2000, GRANTED, Pat. No. US 6479258 Continuation-in-part of Ser. No. US 1999-276860, filed on 26 Mar 1999, GRANTED, Pat. No. US 6352842 Continuation-in-part of Ser. No. US 1999-267118, filed on 9 Mar 1999, GRANTED, Pat. No. US 6238884 Continuation-in-part of Ser. No. US 1999-246178, filed on 4 Feb 1999, GRANTED, Pat. No. US 6171820 Continuation of Ser. No. US 1998-185373, filed on 3 Nov 1998, GRANTED, Pat. No. US 6335179 Continuation of Ser. No. US 1996-760489, filed on 5 Dec 1996, GRANTED, Pat. No. US 5830696 Continuation-in-part of Ser. No. US 1996-677112, filed on 9 Jul 1996, GRANTED, Pat. No. US 5965408 Continuation-in-part of Ser. No. WO 2000-US16838, filed on 14 Jun 2000, PENDING Continuation-in-part of Ser. No. WO 2000-US8245, filed on 27 Mar 2000, PENDING Continuation-in-part of Ser. No. WO 2000-US6497, filed on 9 Mar 2000, PENDING Continuation-in-part of Ser. No. US 2000-594459, filed on 14 Jun 2000, PENDING Continuation-in-part of Ser. No. US 1999-332835, filed on 14 Jun 1999, GRANTED, Pat. No. US 6537776 Continuation-in-part of Ser. No. WO 2000-US3086, filed on 4 Feb 2000, PENDING Continuation-in-part of Ser. No. US 2001-756459, filed on 8 Jan 2001, PENDING Continuation of Ser. No. US 1999-246178, filed on 4 Feb 1999, GRANTED, Pat. No. US 6171820 Continuation of Ser. No. US 1998-185373, filed on 3 Nov 1998, GRANTED, Pat. No. US 6335179 Continuation-in-part of Ser. No. US 1996-760489, filed on 5 Dec 1996, GRANTED, Pat. No. US 5830696 Continuation-in-part of Ser. No. US 1999-376727, filed on 17 Aug 1999, GRANTED, Pat. No. US 6440668 Continuation of Ser. No. US 1996-677112, filed on 9 Jul 1996, GRANTED, Pat. No. US 5965408 Continuation-in-part of Ser. No. WO 1998-US22596, filed on 23 Oct 1998, PENDING Continuation-in-part of Ser. No. US 1999-214645, filed on 27 Sep 1999, PENDING A 371 of International Ser. No. WO 1997-US12239, filed on 9 Jul 1997, PENDING Continuation-in-part of Ser. No. US 2001-790321, filed on 21 Feb 2001, PENDING Division of Ser. No. US 2000-687219, filed on 12 Oct 2000, PENDING Continuation-in-part of Ser. No. US 2000-636778, filed on 11 Aug 2000, PENDING Continuation of Ser. No. US 1998-98206, filed on 16 Jun 1998, GRANTED, Pat. No. US 6174673 Continuation-in-part of Ser. No. US 2001-876276, filed on 7 Jun 2001, GRANTED, Pat. No. US 6468724 Continuation-in-part of Ser. No. US 2001-761559, filed on 16 Jan 2001, PENDING Division of Ser. No. US 1998-98206, filed on 16 Jun 1998, GRANTED, Pat. No. US 6174673 Continuation-in-part of Ser. No. US 1997-876276, filed on 16 Jun 1997, PENDING Continuation-in-part of Ser. No. US 2001-848185, filed on 3 May 2001, PENDING Division of Ser. No. US 2000-636778, filed on 11 Aug 2000, PENDING Continuation of Ser. No. US 1998-98206, filed on 16 Jun 1998, GRANTED, Pat. No. US 6174673 Continuation-in-part of Ser. No. US 1997-876276, filed on 16 Jun 1997,

PENDING Continuation-in-part of Ser. No. US 2000-738871, filed on 15 Dec 2000, PENDING Continuation-in-part of Ser. No. US 2000-685432, filed on 10 Oct 2000, PENDING Continuation-in-part of Ser. No. US 1999-444112, filed on 22 Nov 1999, PENDING Continuation-in-part of Ser. No. US 1998-98206, filed on 16 Jun 1998, GRANTED, Pat. No. US 6174673 Continuation-in-part of Ser. No. US 1997-876276, filed on 16 Jun 1997, PENDING Continuation-in-part of Ser. No. WO 2000-US32208, filed on 22 Nov 2000, PENDING Continuation-in-part of Ser. No. WO 1998-US12674, filed on 16 Jun 1998, PENDING US 2001-300381P 20010517 (60) US 2001-300907P 20010625 (60) US 1995-8311P 19951207 (60) US 1995-8316P 19951207 (60) 19951207 (60) US 1995-8311P Utility APPLICATION FISH & RICHARDSON, PC, 4350 LA JOLLA VILLAGE DRIVE, SUITE 500, SAN DIEGO, CA, 92122 Number of Claims: 102 Exemplary Claim: 1 95 Drawing Page(s) LN.CNT 23775 CAS INDEXING IS AVAILABLE FOR THIS PATENT. The invention is directed to methods for generating sets, or libraries, of nucleic acids encoding antigen-binding sites, such as antibodies, antibody domains or other fragments, including single and double stranded antibodies, major histocompatibility complex (MHC) molecules, \*\*\*T\*\*\* \*\*\*cell\*\*\* receptors (TCRs), and the like. This invention provides methods for generating variant antigen binding sites, e.g., antibodies and specific domains or fragments of antibodies (e.g., Fab or Fc domains), by altering template nucleic acids including by saturation mutagenesis, synthetic ligation reassembly, or a combination thereof. In one aspect, invention provides methods for generating all human or humanized antibodies and evolving them to achieve optimized properties related to stability, duration, expression, production, enzymatic activity, affinity, avidity, localization, and other immunological properties. Polypeptides generated by these methods can be analyzed using a novel capillary array platform, which provides unprecedented ultra-high throughput screening. ANSWER 33 OF 50 USPATFULL on STN 2003:300802 USPATFULL Immunomodulatory polynucleotides in treatment of an infection by an intracellular pathogen Raz, Eyal, Del Mar, CA, UNITED STATES Kornbluth, Richard, La Jolla, CA, UNITED STATES Catanzaro, Antonino, San Diego, CA, UNITED STATES Hayashi, Tomoko, San Diego, CA, UNITED STATES Carson, Dennis, Del Mar, CA, UNITED STATES US 2003212028 A1 20031113

PRAI

DT

FS

LREP

CLMN ECL

DRWN

AB

1.6

ΑN

TI

TN

PΙ

ΑI

RLI

PRAI

LREP

DT FS US 2003-353917

US 2000-179353P

Utility

APPLICATION

Pat. No. US 6552006

A1

20030128 (10)

20000131 (60)

Continuation of Ser. No. US 2001-774403, filed on 30 Jan 2001, GRANTED,

BOZICEVIC, FIELD & FRANCIS LLP, 200 MIDDLEFIELD RD, SUITE 200, MENLO

PARK, CA, 94025 Number of Claims: 51

ECL Exemplary Claim: 1
DRWN 8 Drawing Page(s)

LN.CNT 2075

CLMN

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention features methods for treatment or prevention of infection by intracellular pathogens (e.g., \*\*\*Mycobacterium\*\*\* species) by administration of an immunomodulatory nucleic acid molecule. In one embodiment, immunomodulatory nucleic acid molecule are administered in combination with another anti-pathogenic agent to provide a synergistic anti-pathogenic effect.

L6 ANSWER 34 OF 50 USPATFULL on STN

AN 2003:294272 USPATFULL

TI Non-stochastic generation of genetic vaccines

IN Short, Jay M., Rancho Santa Fe, CA, UNITED STATES

PI US 2003207287 A1 20031106

AI US 2002-223507 A1 20020819 (10)

RLI Continuation of Ser. No. US 2000-495052, filed on 31 Jan 2000, GRANTED, Pat. No. US 6479258 Continuation-in-part of Ser. No. US 1999-276860, filed on 26 Mar 1999, GRANTED, Pat. No. US 6352842 Continuation-in-part of Ser. No. US 1999-267118, filed on 9 Mar 1999, GRANTED, Pat. No. US 6238884 Continuation-in-part of Ser. No. US 1999-246178, filed on 4 Feb 1999, GRANTED, Pat. No. US 6171820 Continuation-in-part of Ser. No. US 1998-185373, filed on 3 Nov 1998, GRANTED, Pat. No. US 6335179 Continuation of Ser. No. US 1996-760489, filed on 5 Dec 1996, GRANTED, Pat. No. US 5830696 Continuation-in-part of Ser. No. US 1996-677112, filed on 9 Jul 1996, GRANTED, Pat. No. US 5965408

PRAI US 1995-8311P 19951207 (60) US 1995-8316P 19951207 (60)

DT Utility

FS APPLICATION

LREP HALE AND DORR LLP, 300 PARK AVENUE, NEW YORK, NY, 10022

CLMN Number of Claims: 69 ECL Exemplary Claim: 1

DRWN 61 Drawing Page(s)

LN.CNT 20997

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

This invention provides methods of obtaining vaccines by use of non-stochastic methods of directed evolution (DirectEvolution.TM.). These methods include non-stochastic polynucleotide site-saturation mutagenesis (Gene Site Saturation Mutagenesis.TM.) and non-stochastic polynucleotide reassembly (GeneReassembly.TM.). Through use of the claimed methods, vectors can be obtained which exhibit increased efficacy for use as genetic vaccines. Vectors obtained by using the methods can have, for example, enhanced antigen expression, increased uptake into a cell, increased stability in a cell, ability to tailor an immune response, and the like.

L6 ANSWER 35 OF 50 USPATFULL on STN

AN 2003:250508 USPATFULL

TI Heterologous fusion protein constructs comprising a Leishmania antigen

IN Skeiky, Yasir, Bellevue, WA, UNITED STATES
Brannon, Mark, Seattle, WA, UNITED STATES
Guderian, Jeffrey, Lynwood, WA, UNITED STATES

PA Corixa Corporation, Seattle, WA, UNITED STATES (U.S. corporation)

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PI US 2003175294 A1 20030918
AI US 2002-98732 A1 20020313 (10)
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PRAI US 2001-275837P 20010313 (60)

DT Utility FS APPLICATION

LREP TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834

CLMN Number of Claims: 82 ECL Exemplary Claim: 1 DRWN 10 Drawing Page(s)

LN.CNT 6952

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention provides a recombinant nucleic acid molecule encoding a fusion polypeptide, wherein the recombinant nucleic acid comprises a heterologous polynucleotide sequence encoding an antigen or an antigenic fragment, and a Leishmania polynucleotide sequence encoding a polypeptide or fragment thereof, wherein the Leishmania polynucleotide is selected from the group consisting of TSA polynucleotide, LeIF polynucleotide, M15 polynucleotide, and 6H polynucleotide. The invention also provides an expression cassette comprising the recombinant nucleic acid molecule, host cells comprising the expression cassette, compositions, fusion polypeptides, and methods of their use in diagnosis or in generating a protective immune response in hosts.

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L6 ANSWER 36 OF 50 USPATFULL on STN
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AN 2003:232060 USPATFULL

TI Vaccine adjuvant

IN Minion, F. Chris, Ames, IA, UNITED STATES
Menon, Sreekumar A., Philadelphia, PA, UNITED STATES
Mahairas, Gregory G., Seattle, WA, UNITED STATES

PA Iowa State University Research Foundation, Inc., an Iowa corporation (U.S. corporation)

PI US 2003162260 A1 20030828

AI US 2003-384948 A1 20030310 (10)

RLI Division of Ser. No. US 2000-692064, filed on 19 Oct 2000, GRANTED, Pat. No. US 6537552

PRAI US 1999-160249P 19991019 (60)

DT Utility

FS APPLICATION

LREP FISH & RICHARDSON P.C., 3300 DAIN RAUSCHER PLAZA, 60 SOUTH SIXTH STREET, MINNEAPOLIS, MN, 55402

CLMN Number of Claims: 7
ECL Exemplary Claim: 1
DRWN 7 Drawing Page(s)

LN.CNT 1632

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The invention features fusion agents such as fusion proteins that are useful for the treatment of and prevention from diseases that are susceptible to the effects of cellular (Th1 type) immune responses. Also encompassed by the invention are nucleic acids encoding the fusion proteins of the invention, vectors containing the nucleic acids, and cells containing the vectors. The invention includes methods of making and using the fusion agents of the invention.

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L6 ANSWER 37 OF 50 USPATFULL on STN
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AN 2003:200470 USPATFULL

TI Vaccination method

```
Hill, Adrian V. S., Oxford, UNITED KINGDOM
IN
       McShane, Helen, Oxford, UNITED KINGDOM
       Gilbert, Sarah C., Oxford, UNITED KINGDOM
       Reece, William, Newtown, AUSTRALIA
       Schneider, Joerg, Barton, UNITED KINGDOM
       Oxxon Pharmaccines, Ltd., Littlemore, UNITED KINGDOM (non-U.S.
PA
       corporation)
                               20030724
PΙ
       US 2003138454
                          A1
ΑI
       US 2002-79167
                          A1
                               20020219 (10)
       Continuation-in-part of Ser. No. US 1999-454204, filed on 9 Dec 1999,
RLI
       PENDING Continuation of Ser. No. WO 1998-GB1681, filed on 9 Jun 1998,
       UNKNOWN Continuation-in-part of Ser. No. WO 2001-GB4116, filed on 13 Sep
       2001, UNKNOWN
       GB 1997-11957
                           19970609
PRAI
       GB 2000-23203
                           20000921
DT
       Utility
FS
       APPLICATION
       HAMILTON, BROOK, SMITH & REYNOLDS, P.C., 530 VIRGINIA ROAD, P.O. BOX
LREP
       9133, CONCORD, MA, 01742-9133
       Number of Claims: 68
CLMN
       Exemplary Claim: 1
ECL
DRWN
       30 Drawing Page(s)
LN.CNT 4443
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       New methods and reagents for vaccination are described which generate a
AB
         ***CD8***
                       ***T***
                                   ***cell***
                                                immune response against malarial
       and other antigens such as viral and tumour antigens. Novel vaccination
       regimes are described which employ a priming composition and a boosting
       composition, the boosting composition comprising a non-replicating or
       replication-impaired pox virus vector carrying at least one ***CD8***
                    ***cell***
                                  epitope which is also present in the priming
       composition. There is also provided a method of inducing a CD4+
         ***T*** - ***cell***
                                  response against a target antigen, by
       administering a composition comprising a source of one or more CD4+
                                epitopes of the target antigen wherein the
                     ***cell***
       source of CD4+ epitopes is a non-replicating or replication impaired
       recombinant poxvirus vector. A method of inducing a combined CD4+ and
         ***CD8*** + ***T***
                                    ***cell***
                                                response against a target :
       antigen is also described herein.
     ANSWER 38 OF 50 USPATFULL on STN
L6
       2003:155723 USPATFULL
AN
       Polynucleotides encoding flavivirus and alphavirus multivalent antigenic
ΤI
       polypeptides
IN
       Punnonen, Juha, Palo Alto, CA, United States
       Bass, Steven H., Hillsborough, CA, United States
       Whalen, Robert Gerald, Paris, FRANCE
       Howard, Russell, Los Altos Hills, CA, United States
       Stemmer, Willem P. C., Los Gatos, CA, United States
PA
       Maxygen, Inc., Redwood City, CA, United States (U.S. corporation)
PΙ
       US 6576757
                          В1
                               20030610
AΙ
       US 2000-724852
                               20001128 (9)
       Continuation of Ser. No. US 1999-247890, filed on 10 Feb 1999
RLI
PRAI
       US 1998-105509P
                           19981023 (60)
       US 1998-74294P
                           19980211 (60)
DT
       Utility
FS
       GRANTED
```

EXNAM Primary Examiner: Park, Hankyel T.; Assistant Examiner: Brown, Stacy S. LREP Powers, Margaret A., Kruse, Norman J., Quine Intellectual Property Law Group, P.C.

CLMN Number of Claims: 54 ECL Exemplary Claim: 1

DRWN 27 Drawing Figure(s); 23 Drawing Page(s)

LN.CNT 6384

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB This invention is directed to antigen library immunization, which provides methods for obtaining antigens having improved properties for therapeutic and other uses. The methods are useful for obtaining improved antigens that can induce an immune response against pathogens, cancer, and other conditions, as well as antigens that are effective in modulating allergy, inflammatory and autoimmune diseases.

L6 ANSWER 39 OF 50 USPATFULL on STN

AN 2003:152969 USPATFULL

TI Screening methods

IN Jakobsen, Bent Karsten, Wantage, UNITED KINGDOM

PA AVIDEX LIMITED, Milton, UNITED KINGDOM (non-U.S. corporation)

PI US 2003104635 A1 20030605

AI US 2002-188444 A1 20020702 (10)

RLI Continuation-in-part of Ser. No. US 2002-103597, filed on 21 Mar 2002, PENDING Continuation of Ser. No. WO 2000-GB3579, filed on 18 Sep 2000, UNKNOWN

PRAI GB 1999-22352 19990921

DT Utility

FS APPLICATION

LREP HALE AND DORR, LLP, 60 STATE STREET, BOSTON, MA, 02109

CLMN Number of Claims: 22 ECL Exemplary Claim: 1 DRWN 23 Drawing Page(s)

LN.CNT 2609

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention provides methods for sequentially screening for AB compounds with the potential to interfere with low affinity receptor-ligand contacts using an interfacial optical assay, such as surface plasmon resonance (SPR). The method comprises contacting a candidate compound with an immobilized receptor, contacting the receptor, which may or may not have the candidate compound bound to it, with the ligand and detecting by interfacial optical assay whether or not the ligand or ligand-compound complex has bound to the receptor or receptor-compound complex. If the ligand binds, the method shows that the compound does not inhibit the receptor-ligand interaction. If the ligand does not bind, the method shows that the compound inhibits the receptor-ligand interaction. The method is particularly useful for screening for inhibitors of the interaction between MHC/peptide complex \*\*\*T\*\*\* \*\*\*cell\*\*\* receptor, MHC/peptide complex and \*\*\*CD8\*\*\* coreceptor or MHC/peptide complex and CD4 coreceptor.

L6 ANSWER 40 OF 50 USPATFULL on STN

AN 2003:142838 USPATFULL

TI Flavivirus and alphavirus recombinant antigen libraries

IN Punnonen, Juha, Palo Alto, CA, United States
Bass, Steven H., Hillsborough, CA, United States
Whalen, Robert Gerald, Paris, FRANCE
Howard, Russell, Los Altos Hills, CA, United States

Stemmer, Willem P. C., Los Gatos, CA, United States Maxygen, Inc., Redwood City, CA, United States (U.S. corporation) PA PΙ US 6569435 В1 20030527 ΑI US 2000-724969 20001128 (9) Continuation of Ser. No. US 1999-247890, filed on 10 Feb 1999 RLI PRAI US 1998-105509P 19981023 (60) US 1998-74294P 19980211 (60) DΤ Utility FS GRANTED Primary Examiner: Park, Hankyel T.; Assistant Examiner: Brown, Stacy S. EXNAM Powers, Margaret A., Kruse, Norman J., Quine Intellectual Property Law LREP Group, P.C. Number of Claims: 51 CLMN ECL Exemplary Claim: 1 DRWN 27 Drawing Figure(s); 23 Drawing Page(s) LN.CNT 6559 CAS INDEXING IS AVAILABLE FOR THIS PATENT. This invention is directed to antigen library immunization, which AB provides methods for obtaining antigens having improved properties for therapeutic and other uses. The methods are useful for obtaining improved antigens that can induce an immune response against pathogens, cancer, and other conditions, as well as antigens that are effective in modulating allergy, inflammatory and autoimmune diseases. L6 ANSWER 41 OF 50 USPATFULL on STN AN 2003:140591 USPATFULL ΤI Screening methods Jakobsen, Bent Karsten, Wantage, UNITED KINGDOM IN AVIDEX LIMITED, Milton, UNITED KINGDOM, OX 14 4RX PA 20030522 PΙ US 2003096432 A1 US 2002-103597 20020321 (10) ΑI A1 Continuation of Ser. No. WO 2000-GB3579, filed on 18 Sep 2000, UNKNOWN RLI GB 1999-22352 19990921 PRAI DT Utility FS APPLICATION HALE AND DORR, LLP, 60 STATE STREET, BOSTON, MA, 02109 LREP CLMN Number of Claims: 22 ECL Exemplary Claim: 1 DRWN 23 Drawing Page(s) LN.CNT 2234 CAS INDEXING IS AVAILABLE FOR THIS PATENT. The present invention provides methods for sequentially screening for compounds with the potential to interfere with low affinity receptor-ligand contacts using an interfacial optical assay, such as surface plasmon resonance (SPR). The method comprises contacting a candidate compound with an immobilised receptor, contacting the receptor, which may or may not have the candidate compound bound to it, with the ligand and detecting by interfacial optical assay whether or not the ligand or ligand-compound complex has bound to the receptor or receptor-compound complex. If the ligand binds, the method shows that the compound does not inhibit the receptor-ligand interaction. If the ligand does not bind, the method shows that the compound inhibits the receptor-ligand interaction. The method is particularly usefull for screening for inhibitors of the interaction between MHC/peptide complex and \*\*\*T\*\*\* \*\*\*cell\*\*\* receptor, MHC/peptide complex and \*\*\*CD8\*\*\* coreceptor or MHC/peptide complex and CD4 coreceptor.

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L6
     ANSWER 42 OF 50 USPATFULL on STN
       2003:81455 USPATFULL
ΑN
TI
       Vaccine adjuvant
       Minion, F. Chris, Ames, IA, United States
IN
       Menon, Sreekumar A., Philadelphia, PA, United States
       Mahairas, Gregory G., Seattle, WA, United States
       Iowa State University Research Foundation, Ames, IA, United States (U.S.
PA
       corporation)
ΡI
       US 6537552
                               20030325
                          B1
AΤ
       US 2000-692064
                               20001019 (9)
       US 1999-160429P
PRAI
                           19991019 (60)
DT
       Utility
FS
       GRANTED
EXNAM
       Primary Examiner: Smith, Lynette R. F.; Assistant Examiner:
       Shahnan-Shah, Khatol S
LREP
       Fish & Richardson P.C.
       Number of Claims: 8
CLMN
ECL
       Exemplary Claim: 1
DRWN
       10 Drawing Figure(s); 7 Drawing Page(s)
LN.CNT 1611
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The invention features fusion agents such as fusion proteins that are
       useful for the treatment of and prevention from diseases that are
       susceptible to the effects of cellular (Th1 type) immune responses. Also
       encompassed by the invention are nucleic acids encoding the fusion
       proteins of the invention, vectors containing the nucleic acids, and
       cells containing the vectors. The invention includes methods of making
       and using the fusion agents of the invention.
    ANSWER 43 OF 50 USPATFULL on STN
L6
AN
       2003:51224 USPATFULL
ΤI
       Peptide extended glycosylated polypeptides
       Okkels, Jens Sigurd, Vedbaek, DENMARK
TN
       Jensen, Anne Dam, Copenhagen, DENMARK
       van den Hazel, Bart, Copenhagen, DENMARK
PΤ
       US 2003036181
                          A1
                               20030220
       US 2001-896896
                               20010629 (9)
ΑI
                          Α1
PRAI
       DK 2000-1027
                           20000630
       DK 2000-1092
                           20000714
       WO 2000-DK743
                           20001229
       WO 2001-DK90
                           20010209
       US 2000-217497P
                           20000711 (60)
       US-2000-225558P
                           20000816 (60)
DT
       Utility
FS
       APPLICATION
LREP
       MAXYGEN, INC., 515 GALVESTON DRIVE, RED WOOD CITY, CA, 94063
CLMN
       Number of Claims: 57
ECL
       Exemplary Claim: 1
DRWN
       2 Drawing Page(s)
LN.CNT 4732
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB
       Glycosylated polypeptides comprising the primary structure
       NH.sub.2--X--Pp--COOH, wherein X is a peptide addition comprising or
       contributing to a glycosylation site, and Pp is a polypeptide of
       interest or comprising the primary structure NH.sub.2-P.sub.x--X--
       P.sub.y-COOH, wherein P.sub.x is an N-terminal part of a polypeptide Pp
       of interest, P.sub.y is a C-terminal part of said polypeptide Pp, and X
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is a peptide addition comprising or contributing to a glycosylation site are provided. The glycosylated polypeptides possess improved properties as compared to the polypeptide of interest.

ANSWER 44 OF 50 USPATFULL on STN

L6

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AN
       2003:38127 USPATFULL
       TUBERCULOSIS ANTIGENS AND METHODS OF USE THEREFOR
ΤI
      HENDRICKSON, RONALD C., SEATTLE, WA, UNITED STATES
IN
       LODES, MICHAEL J., SEATTLE, WA, UNITED STATES
       HOUGHTON, RAYMOND L., BOTHELL, WA, UNITED STATES
      US 2003027774
                       A1
PΙ
                               20030206
                          A1
                               19990318 (9)
ΑI
      US 1999-272975
DT
      Utility
      APPLICATION
FS
       SEED INTELLECTUAL PROPERTY LAW GROUP PLLC, 701 FIFTH AVE, SUITE 6300,
LREP
       SEATTLE, WA, 98104-7092
CLMN
      Number of Claims: 151
ECL
       Exemplary Claim: 1
DRWN
       10 Drawing Page(s)
LN.CNT 2540
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       Compounds and methods for the diagnosis and treatment of tuberculosis
AB
       are disclosed. Compounds include the M. tuberculosis antigens Mtb-81 and
      Mtb-67.2, immunogenic portions thereof and polynucleotides that encode
       such portions. Such compositions may be used, for example, for the
       immunotherapy and serodiagnosis of M. tuberculosis infection.
    ANSWER 45 OF 50 USPATFULL on STN
L6
       2002:344432 USPATFULL
ΑN
ΤI
       ANTIGEN LIBRARY IMMUNIZATION
       PUNNONEN, JUHA, PALO ALTO, CA, UNITED STATES
IN
       BASS, STEVEN H., HILLSBOROUGH, CA, UNITED STATES
       WHALEN, ROBERT GERALD, PARIS, FRANCE
       HOWARD, RUSSELL, LOS ALTOS HILLS, CA, UNITED STATES
       STEMMER, WILLEM P. C., LOS GATOS, CA, UNITED STATES
      US 2002198162
                          A1
                               20021226
PΙ
      US 6541011
                          B2
                               20030401
ΑI
      US 1999-247890
                         A1
                               19990210 (9)
PRAI
      US 1998-74294P
                          19980211 (60)
      US 1998-105509P
                           19981023 (60)
DT
       Utility
FS
      APPLICATION
      MAXYGEN, INC., 515 GALVESTON DRIVE, RED WOOD CITY, CA, 94063
LREP
      Number of Claims: 53
CLMN
ECL
       Exemplary Claim: 1
DRWN
       21 Drawing Page(s)
LN.CNT 5366
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       This invention is directed to antigen library immunization, which
       provides methods for obtaining antigens having improved properties for
       therapeutic and other uses. The methods are useful for obtaining
       improved antigens that can induce an immune response against pathogens,
       cancer, and other conditions, as well as antigens that are effective in
       modulating allergy, inflammatory and autoimmune diseases.
L6
     ANSWER 46 OF 50 USPATFULL on STN
AN
       2002:297432 USPATFULL
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ΤI
       Non-stochastic generation of genetic vaccines
       Short, Jay M., Rancho Santa Fe, CA, United States
IN
       Diversa Corporation, San Diego, CA, United States (U.S. corporation)
PA
PΙ
       US 6479258
                          В1
                               20021112
       US 2000-495052
                               20000131 (9)
ΑI
RLI
       Continuation-in-part of Ser. No. US 1999-276860, filed on 26 Mar 1999
       Continuation-in-part of Ser. No. US 1999-246178, filed on 4 Feb 1999,
       now patented, Pat. No. US 6171820 Continuation-in-part of Ser. No. US
       1998-185373, filed on 3 Nov 1998 Continuation-in-part of Ser. No. US
       1996-760489, filed on 5 Dec 1996, now patented, Pat. No. US 5830696
PRAI
       US 1995-8311P
                           19951207 (60)
DT
       Utility
FS
       GRANTED
EXNAM
      Primary Examiner: Park, Hankyel T.
LREP
       Gray Cary Ware & Freidenrich LLP, Haile, Lisa A.
CLMN
       Number of Claims: 86
ECL
       Exemplary Claim: 1
DRWN
       66 Drawing Figure(s); 61 Drawing Page(s)
LN.CNT 19213
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       This invention provides methods of obtaining vaccines by use of
AB
       non-stochastic methods of directed evolution (DirectEvolution.TM.).
       These methods include non-stochastic polynucleotide site-satuaration
     mutagenesis (Gene Site Saturation Mutagenesis.TM.) and non-stochastic
       polynucleotide reassembly (GeneReassembly.TM.). Through use of the
       claimed methods, vectors can be obtained which exhibit increased
       efficacy for use as genetic vaccines. Vectors obtained by using the
       methods can have, for example, enhanced antigen expression, increased
       uptake into a cell, increased stability in a cell, ability to tailor an
       immune response, and the like.
L6
    ANSWER 47 OF 50 USPATFULL on STN
ΑN
       2002:185292 USPATFULL
TI
       Compounds and methods for diagnosis and immunotherapy of tuberculosis
       Campos-Neto, Antonio, Bainbridge Island, WA, UNITED STATES
IN
       Skeiky, Yasir, Seattle, WA, UNITED STATES
       Ovendale, Pamela, Everett, WA, UNITED STATES
       Jen, Shyian, Seattle, WA, UNITED STATES
       Lodes, Michael, Seattle, WA, UNITED STATES
PΙ
       US 2002098200
                          A1
                              20020725
       US 2001-793306
                               20010226 (9)
ΑI
                          A1
PRAI
       US 2000-223828P
                           20000808 (60)
       US 2000-185037P
                           20000225 (60)
DT
       Utility
FS
       APPLICATION
       TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH
LREP
       FLOOR, SAN FRANCISCO, CA, 94111-3834
CLMN
       Number of Claims: 51
ECL
       Exemplary Claim: 1
DRWN
       18 Drawing Page(s)
LN.CNT 6182
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       Compounds and methods for diagnosing tuberculosis or for inducing
       protective immunity against tuberculosis are disclosed. The compounds
       provided include polypeptides that contain at least one immunogenic
      portion of one or more
                              ***Mycobacterium***
                                                     proteins and DNA
       molecules encoding such polypeptides. Diagnostic kits containing such
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polypeptides or DNA sequences and a suitable detection reagent may be used for the detection of \*\*\*Mycobacterium\*\*\* infection in patients and biological samples. Antibodies directed against such polypeptides are also provided. In addition, such compounds may be formulated into vaccines and/or pharmaceutical compositions for immunization against \*\*\*Mycobacterium\*\*\* infection.

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ANSWER 48 OF 50 USPATFULL on STN
L6
       2002:164677 USPATFULL
ΑN
       Immunomodulatory polynucleotides in treatment of an infection by an
ΤI
       intracellular pathogen
       Raz, Eyal, Del Mar, CA, UNITED STATES
IN
       Kornbluth, Richard, La Jolla, CA, UNITED STATES
       Catanzaro, Antonino, San Diego, CA, UNITED STATES
       Hayashi, Tomoko, San Diego, CA, UNITED STATES
       Carson, Dennis, Del Mar, CA, UNITED STATES
PΙ
       US 2002086295
                          A1
                               20020704
                               20030422
       US 6552006
                          В2
                               20010130 (9)
ΑI
       US 2001-774403
                          A1
                           20000131 (60)
       US 2000-179353P
PRAI
DΨ
       Utility
FS
       APPLICATION
       Carol L. Francis, BOZICEVIC, FIELD & FRANCIS LLP, Suite 200, 200
LREP
       Middlefield Road, Menlo Park, CA, 94025
CLMN
       Number of Claims: 51
ECL
       Exemplary Claim: 1
       8 Drawing Page(s)
DRWN
LN.CNT 2100
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The present invention features methods for treatment or prevention of
AB
       infection by intracellular pathogens (e.g., ***Mycobacterium***
       species) by administration of an immunomodulatory nucleic acid molecule.
       In one embodiment, immunomodulatory nucleic acid molecule are
       administered in combination with another anti-pathogenic agent to
       provide a synergistic anti-pathogenic effect.
     ANSWER 49 OF 50 USPATFULL on STN
L6
AN
       2002:54999 USPATFULL
ΤI
       POLYNUCLEOTIDE TUBERCULOSIS VACCINE
IN
       CONTENT, JEAN, RHODE-SAINT-GENESE, BELGIUM
       HUYGEN, KRIS, BRUSSELS, BELGIUM
       LIU, MARGARET A., ROSEMONT, PA, UNITED STATES
       MONTGOMERY, DONNA, CHALFONT, PA, UNITED STATES
       ULMER, JEFFREY, CHALFONT, PA, UNITED STATES
PΙ
       US 2002032162
                          Α1
                               20020314
       US 6384018
                          B2
                               20020507
ΑI
       US 1998-10733
                          A1
                               19980122 (9)
RLI
       Division of Ser. No. US 1994-338992, filed on 14 Nov 1994, GRANTED, Pat.
       No. US 5736524
\mathsf{D}\mathbf{T}
       Utility
FS
       APPLICATION
LREP
       JOHN W WALLEN III, MERCK & CO INC, PATENT DEPT, P O BOX 2000, RAHWAY,
       NJ, 070650907
CLMN
       Number of Claims: 22
       Exemplary Claim: 1
ECL
DRWN
       20 Drawing Page(s)
LN.CNT 1205
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CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Genes encoding \*\*\*Mycobacterium\*\*\* tuberculosis (M.tb) proteins were cloned into eukaryotic expression vectors to express the encoded proteins in mammalian muscle cells in vivo. Animals were immunized by injection of these DNA constructs, termed polynucleotide vaccines or PNV, into their muscles. Immune antisera was produced against M.tb \*\*\*T\*\*\* - \*\*\*cell\*\*\* antigens. Specific responses were detected in spleen cells of vaccinated mice and the profile of \*\*\*cytokine\*\*\* secretion in response to antigen 85 was indicative of a T.sub.hl type of response (i.e., high IL-2 and helper \*\*\*T\*\*\* - \*\*\*cell\*\*\* IFN-.gamma.). Protective efficacy of an M.tb DNA vaccine was demonstrated in mice after challenge with M.bovis BCG, as measured by a \*\*\*mycobacterial\*\*\* multiplication in the spleens and reduction in lungs of M.tb DNA-vaccinated mice compared to control DNA-vaccinated mice or primary infection in naive mice.

L6 ANSWER 50 OF 50 USPATFULL on STN AN 1998:36732 USPATFULL TI Polynucleotide tuberculosis vaccine IN Content, Jean, Rhode-Saint-Genese, Belgium Huygen, Kris, Brussels, Belgium Liu, Margaret A., Rosemont, PA, United States Montgomery, Donna, Chalfont, PA, United States Ulmer, Jeffrey, Chalfont, PA, United States PA Merck & Co.,. Inc., Rahway, NJ, United States (U.S. corporation) N. V. Innogenetics S.A., Ghent, Belgium (non-U.S. corporation) PΙ US 5736524 19980407 US 1994-338992 19941114 (8) ΑI DT Utility FS Granted EXNAM Primary Examiner: Chambers, Jasemine C.; Assistant Examiner: Hauda, LREP Yablonsky, Michael D., Tribble, Jack L. Number of Claims: 17 CLMN ECL Exemplary Claim: 1,11 DRWN 22 Drawing Figure(s); 15 Drawing Page(s) LN.CNT 1346 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Genes encoding \*\*\*Mycobacterium\*\*\* tuberculosis (M.tb) proteins were cloned into eukaryotic expression vectors to express the encoded proteins in mammalian muscle cells in vivo. Animals were immunized by injection of these DNA constructs, termed polynucleotide vaccines or PNV, into their muscles. Immune antisera was produced against M.tb \*\*\*T\*\*\* - \*\*\*cell\*\*\* antigens. Specific responses were detected in spleen cells of vaccinated mice and the profile of \*\*\*cytokine\*\*\* secretion in response to antigen 85 was indicative of a T.sub.h 1 type \*\*\*T\*\*\* - \*\*\*cell\*\*\* response (i.e., high IL-2 and of helper IFN-.gamma.). Protective efficacy of an M.tb DNA vaccine was demonstrated in mice after challenge with M. bovis BCG, as measured by a reduction in \*\*\*mycobacterial\*\*\* multiplication in the spleens and lungs of M.tb DNA-vaccinated mice compared to control DNA-vaccinated mice or primary infection in naive mice.

- L7 ANSWER 957 OF 957 USPATFULL on STN
- TI Polynucleotide \*\*\*tuberculosis\*\*\* vaccine
- AB Genes encoding Mycobacterium \*\*\*tuberculosis\*\*\* (M.tb) proteins were cloned into eukaryotic expression vectors to express the encoded proteins in mammalian muscle cells in vivo. Animals. . .
- \*\*\*Tuberculosis\*\*\* (TB) is a chronic infectious disease of the lung caused by the pathogen Mycobacterium \*\*\*tuberculosis\*\*\*. TB is one of the most clinically significant infections worldwide, with an incidence of 3 million deaths and 10 million. . . years. As alarming as these figures may seem, it is of even greater concern that multidrug-resistant (MDR) strains of M. \*\*\*tuberculosis\*\*\* have arisen. These MDR strains are not tractable by traditional drug therapy and have been responsible for several recent outbreaks. .
- SUMM M. \*\*\*tuberculosis\*\*\* is an intracellular pathogen that infects macrophages and is able to survive within the harsh environment of the phagolysosome in. . .
- SUMM . . . studies using .beta.-2 microglobulin- and CD8-deficient mice, CTL responses have been shown to be critical in providing protection against M. \*\*\*tuberculosis\*\*\* [Flynn et al, 1992, Proc. Natl. Acad. Sci. USA 89, 12013; Flynn et al, 1993, J. Exp. Med. 178, 2249;. . .
- SUMM Several potentially protective T cell antigens have been identified in M. \*\*\*tuberculosis\*\*\* and some of these are being investigated as vaccine targets. Recent work has indicated that the predominant T-cell antigens are. . . complex of proteins (85A, 85B, 85C) [Wiker and Harboe, 1992, Microbiol. Rev. 56, 648], ii) a 6 kDa protein termed \*\*\*ESAT\*\*\* \*\*\*6\*\*\* [Andersen 1994, Infect. Immunity 62, 2536], iii) a 38 kDa lipoprotein with homology to PhoS [Young and Garbe, 1991, Res.
- DETD . . . by the genes comprising the polynucleotide. In one embodiment of the invention, the polynucleotide is a polydeoxyribonucleic acid comprising Mycobacterium \*\*\*tuberculosis\*\*\* (M.tb) genes operatively linked to a transcriptional promoter. In another embodiment of the invention the polynucleotide vaccine comprises polyribonucleic acid. .
- DETD The Ag85A from M. \*\*\*tuberculosis\*\*\* was amplified from plasmid p85A.tub, which was prepared by ligating an 800 bp HindIII fragment to a 1600 bp HindIII-SphI. . .
- CLM What is claimed is:
  - . 85A mature protein operably linked to transcription regulatory elements, wherein upon administration into a mammal free from infection with Mycobacterium \*\*\*tuberculosis\*\*\* or Mycobacterium bovis said mammal is protected from infection by Mycobacterium \*\*\*tuberculosis\*\*\* or Mycobacterium bovis.
  - 11. A method for immunization of a mammal against infection by Mycobacterium \*\*\*tuberculosis\*\*\* or Mycobacterium bovis comprising the administration of a DNA vaccine comprising a plasmid vector, said plasmid vector comprising a nucleotide. . . 85A mature protein operably linked to transcription regulatory elements, wherein upon administration into a mammal free from infection with Mycobacterium \*\*\*tuberculosis\*\*\* or Mycobacterium bovis, said mammal is protected from infection by Mycobacterium \*\*\*tuberculosis\*\*\* or Mycobacterium bovis.